

# China

## Reconstructs

VOL. XXVIII

NO. 5

MAY

1979

• *The Oriental Song and Dance Ensemble*



• *Democratic Election in a Factory*

• *In the Mountains of the Yao People*



Black Dragon Pool with Fan Mountain in the background, Lijiang Naxi Autonomous County, Yunnan province.

*Zhu Yongqing*

# China Reconstructs

## 中國建設

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Front: Items performed by the Oriental Song and Dance Ensemble. (Clockwise) A dance from Kampuchea; a zheng (25-stringed plucked instrument) recital of Japanese melodies; Jarabe Tapatio, or "hat dance" from Mexico; and Zaire songs by a mezzo-soprano. Zhang Shuicheng and Wu Chuping  
Back: Spring over West Lake · Xinhua

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## Articles of the Month

### An Election of Shop Heads

Would it be for real, the workers wondered? Our reporter tells how this new step in greater democracy for the workers was handled.

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### Unions in a Socialist Country

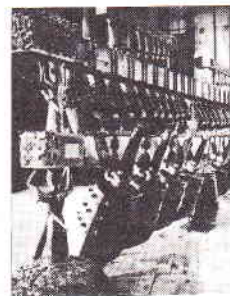
Who runs them? Can they strike? If workers run things, why strike? How do they protect their democratic rights? An interview with an official of the All-China Federation of Trade Unions.

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### New Discovery of Ancient Instruments

A giant set of chime-bells and the first examples of some kinds of musical instruments unearthed last year tell us more about China's ancient music.

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### Zhou Enlai in the May 4th Movement

The young Zhou Enlai as student leader in the surging movement against feudalism and imperialism that began in 1919.

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### The Mountains of the Yao People

Anthropologist Fei Xiaotong returns to the scene of one of his early investigations 43 years ago and describes the progress the Yaos have made.

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### Singing and Dancing Around the World

The Oriental Song and Dance Ensemble that learns exotic dances from many parts of the world and introduces them to the Chinese people.

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### Interest in China

I have had great interest in China since my childhood. My father worked in China between 1903-09 as an engineer on a railway. He always showed great interest and enthusiasm when talking about China. He seldom talked about his work there, mostly about his life in China, the Chinese people, their family life, habits and customs as well as Chinese animals, plants and natural scenery. Because of this, China has become the country I yearn for. Formerly, it was impossible to know more about your country, but now the situation has changed. That's why I treasure your magazine.

K.H.M.T.  
*Felde, Federal Republic of Germany*

### Vice-Premier Deng's Visit

Your Vice-Premier Deng Xiaoping just left the United States after a most successful visit to our country. I wanted to mention to you how pleased most Americans felt about his trip through America. He certainly is a fine statesman, and his wife most gracious and charming. I sincerely hope the future holds more and more opportunities for social intercourse between our countries, for there is so much about China to appreciate, with its vast history, superb contributions to civilization and magnificent reconstruction attempts (and successes!)

L.G.L.  
*Kalamazoo, U.S.A.*

### Foreign Friends

I hope you will write some articles about outstanding foreign friends of China, such as Norman Bethune, Edgar Snow, Joris Ivens, Ma Haide (Dr. George Hatem) and Anna Louise Strong and their contributions to the Chinese revolution.

The articles should not just praise them but tell concretely what they did for China. When and why they came to China? What was the motive force that led them to dedicate their lives to China's liberation? What contributions did they make? Their meetings with Chairman Mao and Premier Zhou should also be reported.

I believe your readers would be most interested in reading them and also the life of other foreigners in Beijing.

S.P.  
*Brussels, Belgium*

### New Format

I am an old reader of your magazine and thought I must write to congratulate you on the new format — January and February received. I like the new size very much. I usually pass the magazine on to friends hoping that one will become a subscriber, too.

W.M.  
*Staines, England*

May I congratulate you on the new format of your excellent magazine. Though other things have changed I am glad that the content has retained its high standard.

I would like to suggest that you try and maintain a balance between news of current affairs in China and the previous history of the country, for they are equally important for a thorough understanding of China.

M.C.  
*Cambridge, England*

Recently I have noticed in your February issue articles on literary works such as "Fables for Today" and "A Selection of Tien An Men Poems." I take a great interest in literature because it is an important way of expressing the emotions and aspirations of the people, and I hope to see more on modern Chinese as well as non-Chinese literature in future issues. I was also fascinated with your lengthy article on the Qin dynasty which was a work well done. Do you think that you could expand your articles on archeological digs in your country and include color plates on the dig areas along with the relics found? I would greatly appreciate it!

D.L.N.  
*Elmhurst, U.S.A.*

I am very glad to get your January 1979 issue. The changed format is very nice. I read with deep interest the "Economic Briefs" and the article by Wang Yaoting on new measures for China's foreign trade. Friends of China are happy about China's continued progress and have no doubt that China will play a more and more important role in the world.

The way introducing China's provinces is very clear and surely a good practice.

A.A.  
*Hoeilaart, Belgium*

Recently, I received your January 1979 issue and was surprised by the new format. Its much improved quality and layout especially amazed me, the color pictures are more attractive and full of festival atmosphere. The new columns such as "Chinese Cookery," "Cartoons," "In Our Society" add to the richness of the magazine. The brief introduction to the main articles on the first page is good. The new format and paper are also practical, making it more convenient to carry and read the magazine. "A Chinese Love Story" by Zhang Lihan is the article I like best.

C.N.H.  
*Panama, Panama*

My only disappointment in the new format of *China Reconstructs* is the quality of the paper. It seems that black-and-white photographs show up less well on the thin paper than on the thicker paper which you used before.

W.W.  
*Cambridge, U.S.A.*

### Sports Articles

I am a high-school student, very fond of sports, particularly swimming, football, badminton and volleyball. I have read your magazine for four years and enjoyed your articles, especially those on sports.

It's my wish to visit your country and see your people some day so as to know more about your culture, science, architecture and other fields.

B.A.  
*Aleppo, Syria*

### More Pictures

I am only suggesting that you put in more pictures showing the various places and towns in China. This will help people like myself who don't expect to visit China any time to see in pictures what China looks like.

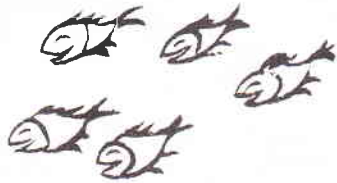
A.Z.N.  
*Mpigi, Uganda*

### Articles Too Vague

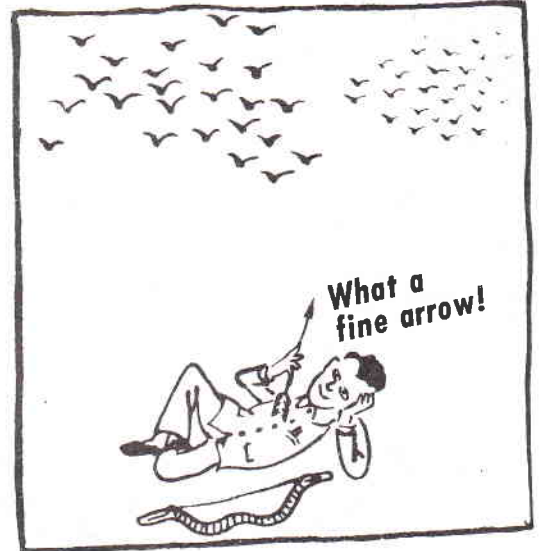
I can understand most of your articles, which are varied in content. A few of my friends say that some of your articles are too vague and general. Since most of your readers are unfamiliar with China, it would be better to publish more short articles and provide explanations to such political terms as "the struggle between two lines," "mass line" etc.

M.J.  
*Bremen, Federal Republic of Germany*

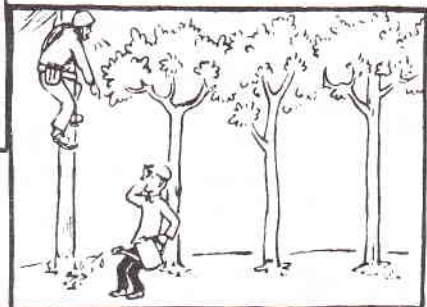
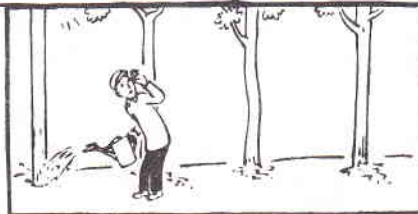
# Three Barbs



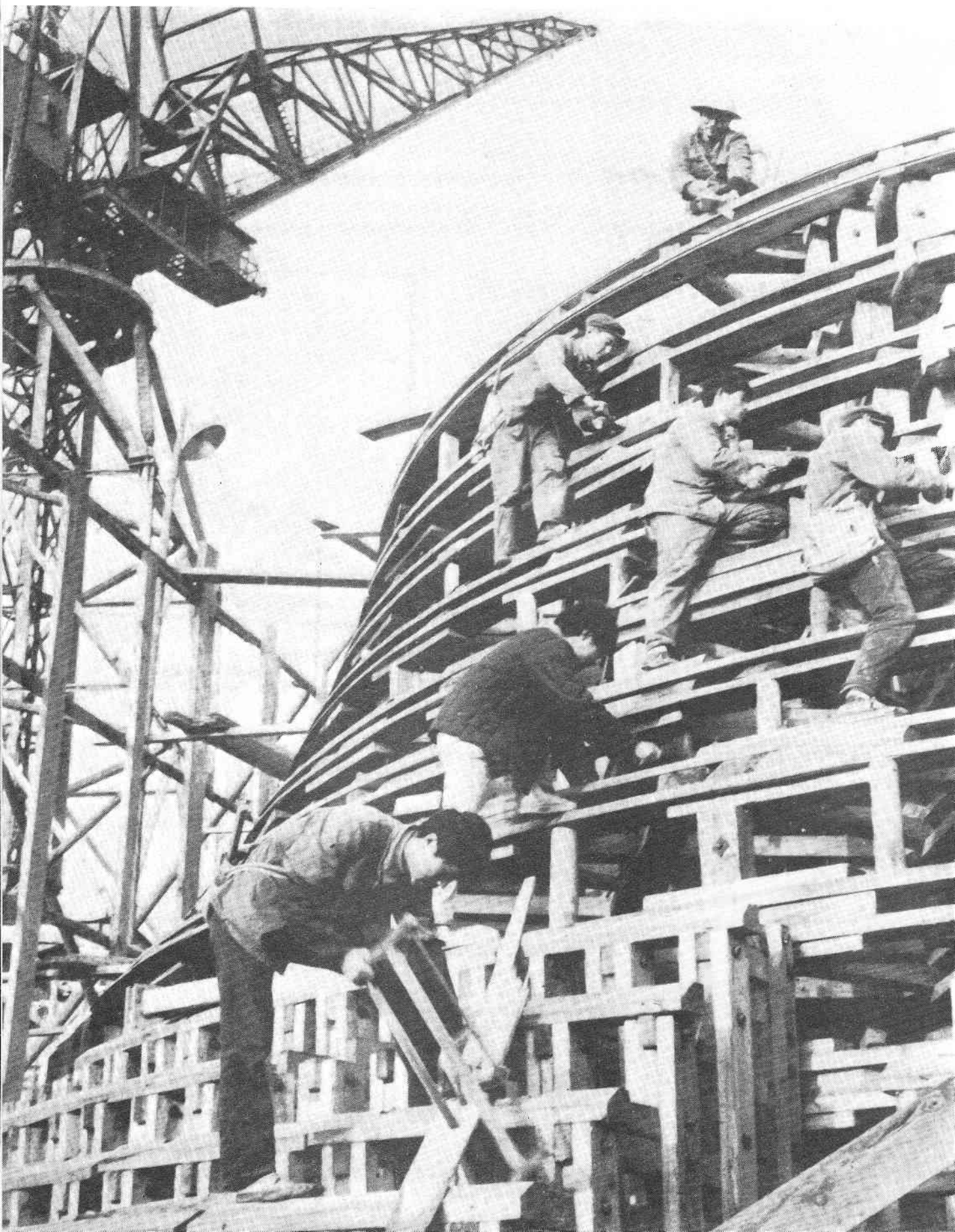
**A blind man catching fish.**  
 — Blinded by "book worship" he fishes exactly where the book tells him to.  
*Hua Junwu (August 1978)*



**What a fine arrow!**  
 — a comment on people who admire a theory but do not apply it.  
*Hua Junwu (August 1978)*



**Following a set pattern.**  
*Ting Zhaoqing*



Erecting a mold.  
*Pan Ying*

ACROSS THE LAND

# *China's Biggest Dam*

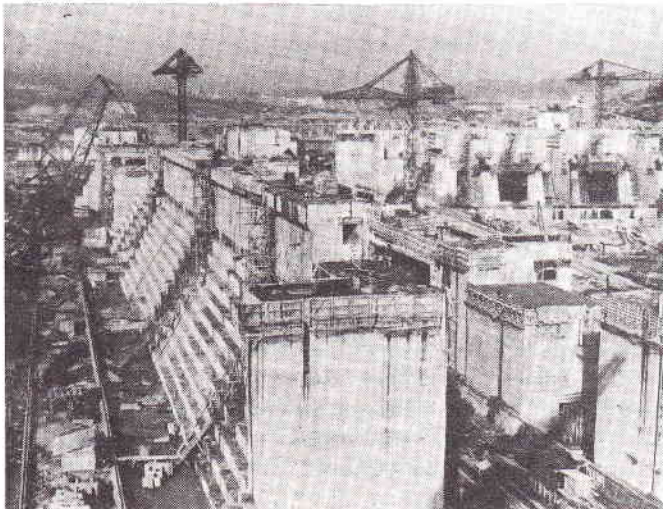


**Zhou Rishan, model electric welder.**

*Wang Houlin*

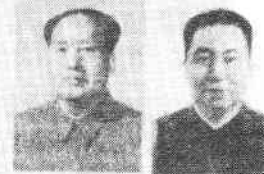
**Construction.**

*Wang Houlin*



**GEZHOU DAM**, part of the Changjiang (Yangtze) River Gorges water control project, is one of the 120 major projects in China's ten-year plan to develop her economy. It will be the biggest hydroelectric power station China has ever built.

Ten thousand of its workers are young people. Working around the clock, they see their job as a direct help to speeding up the country's modernization.



Pinning flowers on the winners in the election in Shop Six.

Wu Chuping

# The Election for Shop

**W**HEN it was announced that there would be an election of shop heads at the Beijing (Peking) Radio Components Factory No. 2 some of the workers were skeptical. They welcomed the idea of electing their immediate leaders, for in the past leaders at every level had been appointed from the top. But would this election be real? According to custom, in previous elections — for positions like People's Congress deputies and various kinds of workers' representatives — a list of candidates had been announced by the factory Communist Party com-

mittee. But, particularly during the Lin Biao and gang of four period, this was often done without the democratic consultation that was supposed to take place first, and voting was a mere formality approving the choice.

Realizing this situation, the Communist Party branch in Shop No. 1 joined with the trade union in sponsoring meetings at which the workers could voice what was on their minds. The Party branch reaffirmed that this time there would be no prefabricated list of candidates and that anyone had the right to nominate anyone he thought suitable, and to be elected.

People were to be elected for the positions of workshop head and his two assistants, production head and technical head. A nomination meeting was held in each of the shop's 12 sections, at which names could be put in anonymously or proposed from the floor. Originally the factory Party committee had stated that the shop heads would be elected for three years. Some workers said this was too long; since they had not had much experience with this kind of election, they might want to have another one sooner. Following this suggestion, the term was made two years.

Names of nominees were collected by the union stewards in

**ZHI EXIANG** is a staff reporter for *China Reconstructs*.





section. How the choice would be made and who would note the results was decided in a meeting of union representatives with each section head.

The names of the 11 nominees were placed before meetings of the workers in each section. After discussions each had his chance to state whether he was for or against each of the candidates. When these meetings were over and the results for the shop tallied, four candidates stood at the top of the list, far in front of the others in number of votes.

According to regulations, as in the past, a final slate of three candidates was to be proposed for the three posts. Some thought this would be all right. Others pointed out that since the fourth candidate had only 13 fewer votes than the third, it would be unfair to exclude him. Thus the Party branch committee agreed to four candidates. They were:

**Xu Nengshi** (156 votes), 43, the present shop head, a Communist Party member with 22 years of work experience. When the workers discussed him they concluded that he was a man dedicated to the revolution, a cadre who worked hard, boldly and conscientiously, got along well with the masses and was concerned about their daily life. Points against him were that

# Heads

ZHI EXIANG

each section and reported to the shop Party branch committee. Altogether 11 names were put in for the three positions. Among them were both Communist Party members and non-Party people, veteran workers and young ones, engineers, technicians, demobilized People's Liberation Army men and returned overseas Chinese.

**DURING** the third week in November 1978 red flags and streamers went up in the shop: "Fully Exercise the Working Class's Right to Lead!" "Choose Energetic, Qualified and Trusted Leaders!" This was the beginning of the second round, the equivalent of primary elections in each

Xu Nengshi (center), Zhang Boming (left) and Tong Shilong. Wu Chuping



he was sometimes too abrupt and direct in his approach to people, he sometimes lost his temper and that he did not know enough about the technical side of the work because he had not been in this particular shop very long. However, the majority of the workers thought that if he overcame these shortcomings he would be a good leader.

Zhang Boming (187 votes), 44, present production head, a demobilized army man and non-Party person with 28 years of work experience. His good points: honest and upright in his ways, capable and hard-working, had been cited every year as an advanced worker, good relations with the other workers, good knowledge of every process in the shop and the ability to keep it running smoothly. His only shortcoming was that he was not bold enough in his work.

Liu Ruirong (113 votes), 48, present technical head, a Communist Party member with 28 years of work experience. His strong points: knew his work well, had good relations with the workers and a lot of work experience. Speaking against him some said that he worked without enthusiasm and didn't really want to shoulder the responsibilities of leadership. Though he was well qualified for forging ahead, he had been content to coast and rest on past achievements.

Tong Shilong (100 votes), 43, present head of Section Four, an experienced worker of 28 years standing. Not a member of the Communist Party. Energetic, astute, competent, a versatile hand at any job in the shop. He was known for his efforts to improve his technical skill and had quite a few technical innovations to his credit. He was good at building unity among the workers and was highly respected by them. His weak point: not being bold and resolute in his work.

FOR the final election the ballot would list three positions to be filled, and after it each voter would write the name of his choice from among the four candidates. If a voter was not satisfied with the list of candidates he could still write in the name of any other person he wished.

Most workers were pretty sure who they wanted for two of the positions, but which, Tong or Liu, was it better to vote for technical head? Technically Tong was as competent as Liu. He had managed his 40-worker section well and every year it had been cited as an advanced unit in types of work involving complicated production technology. Many preferred him over Liu for his enthusiasm. Liu, because of his passive attitude, had not lived up to their expectations as technical head.

What was bothering the workers was that the Party branch committee still had to approve the choice of leaders. Would they approve of Tong if he were elected? Tong was born into a landlord family and was not a Communist Party member. On top of this, he had often raised pointed criticisms about the way the factory and shop leaders did things, and the workers were afraid that, as in the previous period, this might be held against him. Then, too, during the cultural revolution some people misled by the ideas of the gang of four had criticized Tong for paying too much attention to production and not enough to politics. It was generally known now that this had been wrong and that the gang's hullabaloo about attention to politics had been one of their ways to get into power. But some were not sure how clearly this was realized, and whether this fact might not be prejudicial to Tong.

Tong himself had misgivings. The day after he was nominated he sent a letter to the Party branch committee withdrawing as

a candidate because he said he lacked the qualifications and because of what he called his "congenital defect," that is, his class origin.

The Party branch committee called Tong in for a talk. They reminded him that according to Communist Party policy it is the person's own actions that count and not his class origin, and urged him to have faith in the Party and the masses. If he were elected, he should not let a thing like his family background hold him back; if he were not, he should be able to view his defeat correctly. Tong took back his withdrawal.

WHEN time for the election came, 224 ballots, including absentee ballots for those on sick leave, were cast on day and night shifts. This was everyone except a few people on out-of-town assignments. The three elected were:

Xu Nengshi, shop head (196 votes).

Zhang Boming, production head (214 votes).

Tong Shilong, technical head (127 votes).

The results were sent to the factory Party committee who gave immediate approval. The announcement was made, drums and gongs were appropriately beaten and the successful candidates were pinned with red paper flowers. Both the workers and factory leaders were satisfied with the results. Later heads of the sections were elected by the same method.

Now the workers in Shop No. 1 have their own elected leaders, two exactly the same people who held these positions before, and one new person. But all three now know that they have the confidence of the workers and are better able to bring out the workers' enthusiasm. This, in fact, is what has happened. The shop fulfilled its quota three days ahead of schedule in December and five days ahead in January.

Vice-Chairman of the All-China Federation of Trade Unions, Chen Yu.  
Wu Qihua



# China's Trade Unions

## -An interview with Chen Yu, Vice-Chairman of the All-China Federation of Trade Unions

**QUESTION:** What is happening in China's trade unions?

**ANSWER:** Due to sabotage by Lin Biao and the gang of four, the All-China Federation of Trade Unions was closed down in 1967. For 11 years unions at the factory and shop level also ceased activities or remained only in name.

If unions pushed production, the gang called them capitalist oriented. If they defended workers' rights they were only "welfare unions." But why shouldn't unions in a socialist country push production and promote the welfare and democratic rights of the workers? The gang persecuted union leaders, activists, labor heroes and veteran workers. They also pinned the label of "bourgeois intellectuals" on all mental workers such as engineers and technical personnel, and kept such people from joining unions. Followers of the gang took over unions in many

places, then interfered with the workers' rights, provoked armed struggle between them and created anarchy. They also opposed and broke down all rational rules and regulations, sabotaged labor discipline and blunted the workers' initiative. In short, the gang tried to turn the unions into instruments to help them seize Party and state power. "We were supposed to be the masters, but in fact we had no say," the workers complained.

After the gang of four was downed, the Party Central Committee restored the All-China Federation of Trade Unions. At its Ninth Congress in October 1978 the union discussed its basic principles, reassessed its tasks in the drive to modernize the country, revised its constitution and elected a new leading body. It was significant that a worker in the labor movement 50 years, Ma Chungu, was elected one of the Congress's vice-chairmen. The Congress

National labor heroes (from right to left): Wang Chonglun, Su Guangming, Ma Liu hai, Ma Hengchang, Zhang Baifa and Wang Chaozhu chatting during the Ninth Congress of the All-China Federation of Trade Unions.

Xinhua





Workers at the Shanghai Electric Machinery Plant in a class for professional study after work.

Xinhua

evaluated the 17 years of union work it had done before the cultural revolution as having been generally good.

**QUESTION: What do unions do in China?**

**ANSWER:** China's unions should fight for the workers' democratic rights so that they can really be the masters of the country. They should do their part in helping enterprises change the backward forces of production and reform systems of management as needed for a modern economy. They should organize workers' study of science, technology and management, and promote the active participation of workers in management. At the same time they must be concerned with the life and well-being of the workers, handling such problems as payment according to work, reform of the system of extra pay for extra work, and improvement of working conditions, housing, canteens, food shops and sanitation.

China is a developing country. During the time of the gang of four the economy — and the unions — were brought to the point of collapse. This has been largely cleaned up and the people can now work for rapid progress toward a modern society. Among other things this requires better efficiency in labor and close cooperation of the unions with both government and enterprise leaders.

**QUESTION: What is the relationship of the unions to the Chinese Communist Party?**

**ANSWER:** Chinese unions are workers' mass organizations. All working people, whether manual or mental workers, are qualified to join, provided their wages are their sole or main source of income. Joining is voluntary and one is also free to withdraw at any time. We say that the unions are under the

leadership of the Chinese Communist Party. But this does not mean they are dominated and run by the Party. It means that the Party, as the political organization of the working class, puts forward aims and goals, and in general guides the labor movement. Some union leaders, of course, are members of the Party because Communists are usually good workers and good leaders, but leaders do not have to be members.

Chinese Communists have worked in the labor movement for a long time. In 1920 they were organizing and educating the workers. Mao Zedong (Mao Tsetung) and other veteran proletarian revolutionaries were all at one time or another leaders in the workers' movement. After the Party was founded in 1921 the Central Committee set up a national office for the trade union movement. The February 7th Beijing-Hankou (Peking-Hankow) Railway workers' strike of 1923 against the feudal warlords, the May 30th movement, the Guangdong-Hongkong strike of 1925 and the three workers' uprisings in Shanghai in 1927 were all led by the Communist Party.

When liberation of the country came in 1949 and the working class became her masters, the unions helped the Party and the people's government restore production and increase it, and push socialist revolution and construction forward.

**QUESTION: Do mental workers have unions?**

**ANSWER:** Yes. In a socialist country those who work with their brains are workers as much as those who work with their hands. A few years ago the gang of four purposely created antagonism between mental and manual workers. They labeled as "bourgeois" all those in the fields of culture, education,

medicine, science and technology, and excluded them from trade unions. Today unions in universities, middle schools, hospitals, research institutes, publicity and cultural units have reappeared.

**QUESTION: What do the unions do to guarantee the workers' democratic rights? Do Chinese workers have the right to strike?**

**ANSWER:** Addressing the Ninth Congress of the All-China Federation of Trade Unions Vice-Premier Deng Xiaoping said, "The trade unions must fight for the democratic rights of the workers and oppose all forms of bureaucracy." Some leaders of enterprises still have feudal patriarchal attitudes, are bureaucratic and order people around. Some even act against national policies or break the law. In such cases the union should unite and lead the workers to fight against such non-socialist behavior. They have the right to strike if the situation cannot be solved in socialist ways. This right is guaranteed by China's Constitution. If leaders break the law or suppress democracy, the union demands that they be criticized, warned, punished or dismissed from their posts according to the circumstances.

For example, a Party secretary at the Shanghai Diesel Engine Plant recently used his position to get a new apartment which should have gone to a worker. The union investigated, raised the question with the Party committee and suggested how it should be handled. The secretary was ordered out of the apartment and temporarily dismissed from his post during which time he was to make a self-criticism.

The most important right of workers under the socialist system is the right to participate in managing

the government, enterprises, culture and education. It is the responsibility of the union to help guarantee this right. According to the union constitution, "when the proper interests or democratic rights of a member are infringed upon, he has the right to demand that the union speak for him and protect him according to law."

The Ninth Trade Union Congress stipulated that "drawing workers into management and safeguarding the workers' democratic rights as masters of the country" is one of the most important tasks of the unions. In the early days of the people's republic many enterprises set up management committees and workers' congresses which drew workers into management. In 1957 during the Eighth National Party Congress it was proposed to broaden the workers' democratic rights and begin setting up workers' congresses in larger enterprises and all-member meetings in the smaller ones.

The Ninth Trade Union Congress studied the effect of these workers' congresses and, with the support of the Party Central Committee, decided that they should be set up in all enterprises. All important questions in the enterprises must be discussed by these congresses, including the factory's long-term plan, production plans, bonuses, finances, workers' welfare, methods of giving awards and penalties, and fair and rational rules and regulations. The workers' congresses are supposed to see that leaders correctly carry out the policies of the Party and government, periodically make their own evaluation of the factory's work, and raise criticism and suggestions. They can demand punishment or

Retired workers playing Chinese chess at a workers' cultural palace.

Xinhua





One of the trade unions' tasks is to help run nurseries and kindergartens.

replacement of leaders who violate the law, seriously neglect their duties or work in a very unpopular way.

The workers' congresses help supervise the election by the workers of their own shop heads, section chiefs and team leaders. When the workers' congress is not in session the trade union carries on its routine work such as preparing for the next congress, checking up on the implementation of the previous congress's resolutions, and handling the demands, proposals, criticisms, requests and grievances of workers.

**QUESTION: What does the union do to promote and protect the well-being of the workers?**

**ANSWER:** The union's responsibility is to safeguard the welfare of the workers and help improve their living standards. Under the socialist principle of "to each according to his work" they cooperate with government departments and factory administrations to improve the system of wages and bonuses so that the material interests of the individual worker coordinate with the rate of labor efficiency and rate of profit.

How they are to do this is at the moment in the experimental stage. Enterprises that fulfill or go over the state plan will according to their profits receive a sum that will be used for collective welfare activities and bonuses for all-round good work to be paid to individuals or units (or for single achievements such as, for example, a new way for truck drivers to save on fuel). At the same time the union promotes a communist attitude toward work and encourages people not to emphasize individual gain but to work for unity, cooperation and class solidarity.

The government pays for labor insurance but hands the responsibility for administering it to the

unions. All workers have free health care and pensions. Problems such as emergency expenses, births and death are covered. The unions also maintain sanitariums, cultural centers, clubs and amateur performing arts teams.

The unions help enterprises and local administrations improve workers' housing, canteens and general living conditions. Housing is still crowded and inadequate in many places, and canteens and nursery-kindergartens cannot yet meet the demands in quality or quantity. These problems will be improved gradually as production and labor efficiency increases.

**QUESTION: What is the organizational structure of Chinese unions?**

**ANSWER:** Workers are organized into basic-level unions by industries or lines of work. They are federated under the general trade unions of the provinces, municipalities and autonomous regions. All are headed by the All-China Federation of Trade Unions. Effective leadership of all union organizations is in the hands of the workers' congresses. These elect the trade union leading committees at all levels.

**QUESTION: Where do funds come from and how are they allocated?**

**ANSWER:** The funds come from four sources: (1) Union members' monthly dues, which are 0.5 percent of their monthly wage. (2) Every enterprise must allot a sum for union activities equivalent to 2 percent of the total wages paid its workers. This does not come out of wages. (3) Any income derived from cultural and sports activities sponsored by the unions, which is used to further such activities. (4) Subsidies from the government or enterprises.

The basic-level unions keep 60 percent of the sum the factory pays them. Of the remaining 40 percent, five percent goes to the All-China Federation and the rest to maintain the province, municipality, autonomous region and county union organizations. The basic-level unions use about 25 to 37.5 percent of the funds paid them by their factories for educational purposes such as special courses, lectures, reading material and spare-time schools. Union funds also go for cultural activities, physical culture, a fund for helping members with economic difficulties and office expenses.

**QUESTION: Do Chinese unions have international exchanges with unions abroad?**

**ANSWER:** During the first decade or so of the new people's republic there were many such exchanges. During the Lin Biao and gang of four times, however, these stopped. The recent Ninth Trade Union Congress reaffirmed that China's trade unions would develop relations with all friendly trade unions of other countries, work to promote understanding and friendship between the workers of different countries, and support the just struggles of the workers and their unions.

This year the All-China Federation will pursue friendly contacts with trade unions in over 90 countries. China's trade unions will continue to develop their international relations.

# The Search for a Family

LIANG YINGLIN

ONE DAY last summer the Returned Overseas Chinese Association of Chonglou commune in Taishan county, Guangdong province, received a letter from the United States. It was simply addressed to "People's Government, Yonglouxu (a village in the county)."

"My name is Deng Cheng (it read) but I was called Deng Aoxing before. I'm from Daning in Yonglouxu, Taishan county. I was forced to join the Kuomintang army to replace a conscript whose family could afford to buy him off. I couldn't stand the thought of the bad conditions, so I ran away on the way to the recruiting center.

"At first I thought I'd go back home to live with my family. But in those days it was very hard to live by honest work. Besides, the Kuomintang government would hunt me down and arrest me. I wandered about and later drifted to Hongkong. With the help of a friend I went to the United States. Thirty years have gone by since I left home. I haven't heard from my family since I left. I'm getting on seventy now. Because I'm old and lonely I think of my hometown and my family. Now that overseas Chinese are being well treated again in China, I decided to ask you to help me find my family."

The letter was forwarded to Wu Yaozhu, 83, a former laundry worker in New York, now vice-chairman of the local returned overseas Chinese in Yonglouxu. He has warmly served the families of overseas Chinese, helped them write thousands of letters and brought many of them together

again. During the cultural revolution, he was called a "spy" because the gang of four held that anyone with connections overseas was a reactionary. His home was searched and he was removed from his job, threatened and harassed. After the fall of the gang, the people's government reiterated its policy for overseas Chinese and those who have returned and their families: they should have equal treatment, there should be no discrimination against them and special consideration should be given according to their special situations. Now Wu Yaozhu is back serving the people.

The vague address on the letter did not help, for there were people named Deng living in quite a few

villages. But the writer was already seventy — not many more springs and autumns for him — and Wu must help him reunite with his family.

Wu and Chen Shangming, another old returned overseas Chinese first found ten villages in the commune where people with the name Deng lived but no "Daning village." They decided to make a village-by-village investigation. When they came to the seventh, Rengang, about a dozen kilometers away, it was already 4 o'clock in the afternoon. Yes, they were told by some elders, it used to be called Daning village before liberation and a man called Deng Aoxing did live there 30 years ago. In fact, Deng's wife, Wu Xiutao, was still alive and at home now. Excited, the two were taken to the woman's home, a new two-story house. Wu Xiutao herself, about 60, greeted them.

"Is this Deng Cheng's home?" Wu asked. "Deng Cheng is another name for Deng Aoxing."

"Why do you ask about a man who died long ago?"

"No. He is still alive. Look, here's a letter from him. He's trying to find you!" Every word of the letter seemed to knock at the doors of her memories. Within minutes the whole village had

Wu Yaozhu (center) and Chen Shangming write a letter for Lei Jiachang to his relatives overseas.





Deng Cheng's wife Wu Xiutao and her family.

heard the news. People crowded into her house to congratulate her.

Forty years ago Wu Xiutao had been married at 18 to Deng Aoxing and they had a son. "When he was three," she said, "there was a famine in Taishan. Aoxing went out to try to get some rice for us. One day he didn't come back. My son and I had such a hard time that each day seemed like a year.

"Later, I heard that one could get a job in Yangjiang. But who would hire a woman with a child? I left my son, Deng Canfang, with my father and mother-in-law, thinking I would come to get him when I had earned enough money. On the way to Yangjiang I saw a lot of people who had died of starvation. I couldn't find any real job there but did what odd jobs there were in Yangchun. I wasn't used to the place and the weather, so I often got sick. What I earned just kept me alive. How could I go back home?"

Meanwhile her father and mother-in-law had died, Wu Xiutao's son had disappeared and she

couldn't find him. She stayed near her work in Yangchun, married again and had three daughters. Later her second husband died. In 1962, she went to Chonglou to try and find her son. Several days passed with no clue. Feeling hopeless, she went to the bus station to go back to Yangchun. There she told her story to other passengers. A woman said there was a student named Deng Canfang in the Chonglou Middle School. At once she rushed to the school and found her son at last.

Now the two men from the overseas Chinese association hurried to Chonglou to take their news to Deng Canfang. They found him that evening. He was surprised but said, "You are mistaken. I lost my father when I was three." But when he read the letter he was excited and tears came to his eyes. He told them his own story.

When his mother had left and there was no news of his father, his grandfather, unable to cope with a famine, had committed suicide. Some of his young uncles were sold for grain and others ran

away. He and his grandmother went out begging. Just before liberation, his grandmother died and he grazed cattle to keep himself alive. After liberation, the people's government sent him to school. He went to middle school and became a teacher in Chonglou Middle School. In 1972 when he was about to get married the government helped him build a house. Then he brought his mother and his two sisters to live with him.

That night Wu Yaozhu wrote to Deng Aoxing in the United States that they had found his family. The old man's son wrote, enclosing a photograph of the family. Soon the son got an answer from his father.

He wrote, "I saw all of you in the picture with both joy and sorrow—joy to see my family flourishing after several decades' separation, sorrow that we all suffered beyond description in the past. I am very moved of the way you are taken care of by the government. I know you are all happy. . . . For the time being I cannot come to see you but I'm enclosing \$200, \$100 for the travel fares of the gentlemen who took so much trouble finding you, the rest for some candy and fruit for my grandchildren."

Of course, the overseas Chinese association people wouldn't accept the money designated for them but gave it to the family. "Write your father about the big changes that have taken place in our country and ask him to come back to have a look at how nice his old hometown is today," Wu Yaozhu told the family.





SOUTH FUJIAN — I

# Quanzhou, Town of Twin Pagodas

WU TONG



A relic of Brahminism. Lin Xiyin

the river at its entrance to the sea. For more than 900 years people, horses and carts entered the city across this bridge. Today the bridge still stands, protected by the state as an important historical monument. Trucks and other heavy vehicles are forbidden to use it. One crosses the river on a dam built in 1973 not far north of the old stone bridge.

Quanzhou was called Zayton (coralbean) in ancient times because of its tremendous trees of this species planted during the Five Dynasties (907-960). Today there are only a few left. Some line the road to the Tang dynasty Kai Yuan Temple, one of the city's most interesting sites.

This temple was constructed in 686 and named the Lotus Flower Temple. According to legend the place had been a mulberry tree garden. One day the owner dreamed that a Buddhist priest asked him for permission to build a temple there. The owner was unwilling. "Only if the mulberry trees in my garden bear lotus flowers," he said. A few days later lotus flowers really blossomed on his trees. Today in the court west of the main hall there

## Song dynasty ship unearthed at Quanzhou.

Photo by the Quanzhou Sea Communication Museum



**B**ACK from his long journey to China in 1298, Marco Polo said that Quanzhou, then called Zayton, and Alexandria were the world's two biggest ports. The famous Arab historian Ibn Batuta (1304-1377) concurred after visiting China in the 1360s, though he held that Quanzhou was actually the biggest. In the Tang dynasty (618-907) it was a thriving port. According to a 10th-century book of the Song (Sung) dynasty (960-1279), it had 500,000 inhabitants.

Quanzhou is in Fujian (Fukien) province on the Luoyang River south of Fuzhou (Foochow), the capital. A stone bridge 83 meters long and 7 meters wide spans

WU TONG is a staff reporter for *China Reconstructs*.

is still an ancient mulberry tree bearing a sign that reads: "Mulberry Lotus Tree."

The name of the temple has been changed many times. In 738 the Tang emperor Xuan Zong, a devout Buddhist, ordered every large town in China to build a temple named Kai Yuan after the title of his reign.

The one built in Quanzhou, grand and elegant, is as famous as the Guang Ji Temple in Beijing (Peking), Ling Yin Temple in

The tablet where Zheng He burned incense before setting out on his fifth voyage to the Middle East and Africa.

Wang Hongxun



Hangzhou (Hangchow) and the Pu Tuo Temple in Xiamen (Amoy). Its exquisite architecture, art and stone carvings are outstanding among China's ancient temples. One hundred heavy stone columns support the main hall — of course called the Hall of One Hundred Pillars. On top of 24 of the pillars are flying musicians whose beautiful crowns support the beams and also serve as part of its brackets. The upper part of their bodies are women and the lower part birds. Wearing thin skirts and holding musical instruments or sacrificial



Manichean statue in relief.

Wang Hongxun

articles, they seem to be flying in the sky.

There are many kinds of carvings in the temple — Brahminic relief, figures resembling the Sphinx, beasts' heads and birds' bodies in stone, columns in the ancient Greek style and traditional Chinese dragons and tigers. Of fine workmanship, many of these were religious decorations on buildings around Quanzhou, later moved to the Kai Yuan Temple and renewed.

Two large stone pagodas stand on either side of the main hall, the pride of the people of Quanzhou. They are often used as trade marks on local products. Each pagoda has five stories and eight sides. Each side has two life-size stone Chinese or Indian Buddhas delicately carved in different styles. The bottom of the east

pagoda is inscribed with 40 tales from the life of Sakyamuni and the west with animals and flowers.

The pagoda on the east, 48 meters high, was built in 865 and named the Zhenguo Pagoda. The west one, 44 meters high and built in 916, was named Renshou. Both were of wood. In 1238 the east tower and in 1228 the west one were rebuilt of stone, retaining the design of the original wooden structures. From the top of the pagodas people can see all of Quanzhou.

**B**EFORE liberation only a cemetery existed west of the city. Today a big sugar refinery and a porcelain factory have been built nearby. On a hill formerly wild, a factory makes candied fruit famous at home and abroad. The city has two new boulevards



Twin pagodas in Quanzhou.

Stone statue of Lao Zi, founder of Taoism, in Quanzhou.



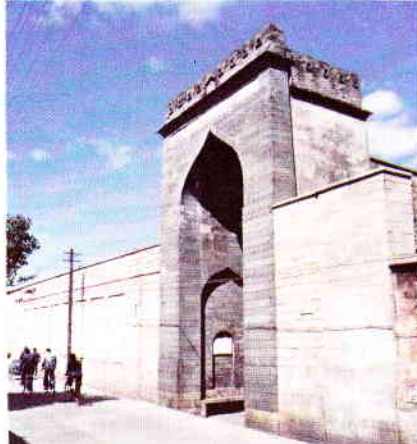
One of the ancient halls in the Kai Yuan Temple.



Flying musician statues on the carved brackets supporting the beams of the main hall in the Kai Yuan Temple.



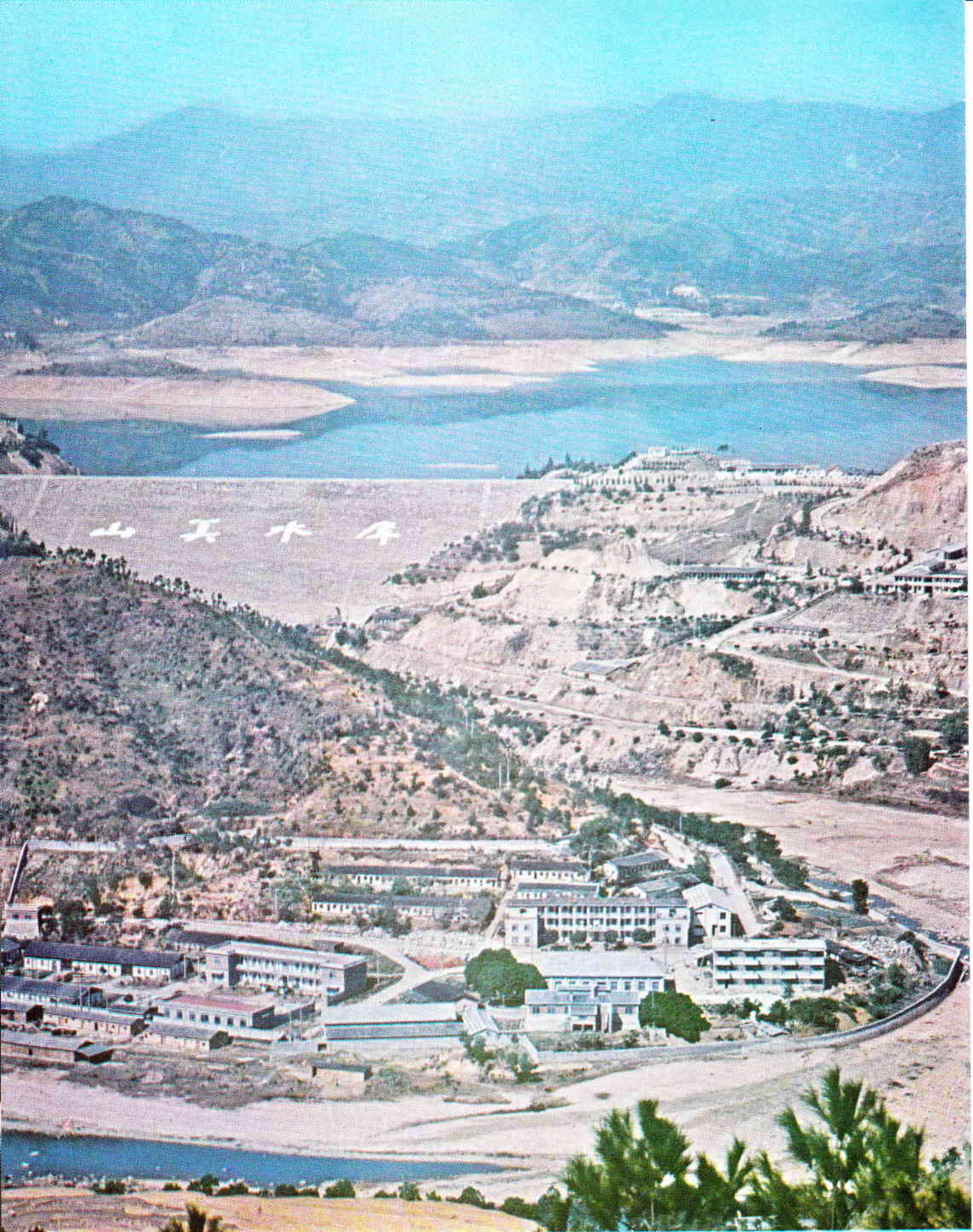
Stone dragon pillars with openwork carving in the south Fujian style in the Kai Yuan Temple.



The Quanzhou Mosque, one of China's oldest.







Shanmei reservoir built near Quanzhou after liberation.

*Photos by Wang Hongxun*

lined with tall buildings. Near Baiyuan Chi, formerly only a dirty pool, are the China Travel Agency, the Overseas Chinese Travel Agency and a hotel for compatriots from Taiwan province.

Outside the city's east gate is another cemetery. In one of the local annals of Fujian province He Qiaoyuan of the Ming dynasty (1368-1644) is quoted as saying, "During the reign of Wu De (618-626) of the Tang dynasty Muhammad sent four disciples to China to preach Islamism. One worked in Guangzhou, one in Yangzhou and the other two in Quanzhou. When the two in Quanzhou died, people buried them on Lingshan Hill." The local people later called their graves "holy tombs." Lingshan Hill gradually became a place to bury those who had come from far away to Quanzhou for trade or other reasons. The village below the hill was called Holy Grave Village.

Today the tombs of Lingshan Hill lie among pines and acacias. Halfway up the hill below a small pavilion are the two granite tombs of the disciples of Muhammad. Behind them is a half-circle stone balustrade. The graves are marked with five stone tablets with the details of their lives. The middle one, inscribed in Arabic, was placed in 1323. The one on its right, erected in 1417, had been used as an ancestral tablet. The great Ming dynasty navigator Zheng He once burned incense here before setting out on his voyage to the Middle East and Africa.

Zheng He was a Chinese Moslem of the Hui nationality. He made seven voyages between 1405 and 1433, each time leading a large fleet. Half a century before Columbus, his fleets visited over 30 countries in Asia and Africa. Quanzhou was the port from which he started his fifth voyage.

Before he left he came to Lingshan Hill to burn incense and ask the protection of the gods.

ACCORDING to history books, Islamism was introduced to China in 651. From that time on, many people from Arabic countries, Persia, Syria and southeast Asia came to Quanzhou for trade, religious or other reasons. At one time some 10,000 lived in the southern part of the city.

A mosque was built by the local Moslems in 1010. Also known as the Temple of the Unicorn, it is one of the famous Moslem buildings in China. Arabic inscriptions



in the mosque record the year of its construction and its renovation in 1310 by Ahmad from Jerusalem. In design it was a copy of the mosque in Damascus. Its most attractive feature is a stone gate 20 meters high and 4.5 meters wide. Since liberation the mosque has been renewed three times.

North of the city is a stretch of forested hills with giant bister stones. The place is a scenic spot with many historical sites.

Quanzhou not only hosted Islamism but was friendly to other religions, including Buddhism, Taoism and Manicheism.

On Wushan Hill, three kilometers from the city, a five-meter-high stone statue of Lao Zi, the



Wang Hongxun  
The ancient stone bridge over the Luoyang River

founder of Taoism, has been sitting for a thousand years. Taoist monasteries were built in Quanzhou as early as the Western Jin dynasty (265-316). The statue of Lao Zi was originally surrounded by a temple which long ago collapsed. Carved from one piece of stone in the hill, the statue is a rare work of art, possessing both grace and strength. On top of the hill behind the statue of Lao Zi is a TV transmission tower. Below this are many stone caves with Buddhist names and giant carved Buddhas.

Half an hour from the city by car is Wanshan Peak. Here under a big banyan tree is a small stone monastery, all that remains of Manicheism today. The religion, founded by the Persian Mani (216-276), was brought to China in the 7th century. A stone tablet near the monastery records the activities of the Manicheans in Fujian during the Song dynasty. On the mountainside behind the monastery a carved circle two meters across contains a statue in relief of a Manichean with long hair and a

wide-sleeved gown. The monastery has recently been rebuilt. Under large trees close by is a teahouse. Rare tropical fruit trees grow on the mountain. This is a favorite spot for local people.

In August 1974 a wooden ship of the 12th or 13th century was found at the bottom of Quanzhou Bay southeast of the city. It is 24.2 meters long and 9.15 meters wide. In its cabin were fragrant wood, medicinal herbs, betel nuts, pepper, tortoise shell, frankincense, cinnabar and mercury. The ship is the first in China to be discovered in such good condition, and aroused great interest in China and abroad. Ships this size,

handicrafts had grown. Its stone carvings were being sold in Japan and southeast Asia. Then the old man made a surprising comment: "Quanzhou has survived!"

What he meant was that, when he had left, Quanzhou had been a dying city under the rule of the Kuomintang and the plunder of the imperialists. Liberation brought the city back to life and revived its traditional production of pottery, textiles and handicrafts. Today the city has 250 factories producing in value about 18 times more than in 1950. The people have built water conservation projects and dams, expanded the farming area and increased fishing. Before liberation the city had to import rice. Today the area sells it. The old port has been rebuilt and new wharves are under construction.

The sea is half an hour away by car along the west bank of Quanzhou Bay. There, from an ancient five-storied octagonal stone tower on a hill, one can see the East China Sea and the Taiwan Straits. The tower, 21 meters high, was built in 1162 to aid navigation. Originally named the Wanshou, today it is called the Tower of the Two Sisters-in-Law.

The reason for the name lies in a story. In the old society many people forced by poverty to cross the seas to other countries left on ships from Quanzhou. Very often their wives and children received no news from them. Every morning one such wife and her hus-

band's sister carried a stone to a hill where they stood watching for the man's return. As the days passed, the stone pile grew higher and higher until it finally became a tower. At last the two sisters-in-law died.

**T**HE 65-hectare campus of the Overseas Chinese University lies in a beautiful mountain area east of Quanzhou. The sabotage of Lin Biao and the gang of four stopped its work for eight years. Last year it reopened, enrolling an initial 180 new students.

The government built the university in 1960 in Quanzhou, native place of most of the overseas Chinese from Fujian. It has trained over 2,000 Chinese students from 17 countries. The university specializes in engineering but also has departments of science and other specialities. Its head is Liao Chengzhi, who is also a Vice-Chairman of the Standing Committee of the National People's Congress. A board soon will be established with representatives of overseas Chinese both in China and abroad.

The university's buildings have a floor space of over 90,000 square meters. There is a well-equipped chemical laboratory. The government has given the university 1,300,000 yuan for new research equipment. Many students from Burma, Indonesia, Singapore, Malaysia, Thailand and also from Taiwan, Hongkong and Macao take their degrees here.

**A new boulevard in Quanzhou.**

*Yang Xiangqian*

**Students at the Overseas Chinese University learning to use the analytical balance.**

such as the ancient Roman galley and the Gokstad Viking ship in Oslo, are rare finds in the world. The Quanzhou ship is now in a special exhibition hall near the Kai Yuan Temple.

**A**N old Chinese man who had lived in Malaysia for over 30 years recently came back to Quanzhou. "Things have changed greatly," he said. He visited factories and communes. The old port had expanded. A reservoir holding 400 million cubic meters of water had been built in 1972. The city's production of traditional





Edgar Snow (right) interviewing (left to right) Xie Juezai, Huang Hua and Wang Lin during his visit to Yanan in 1936.



## Edgar

# Snow's Vision

LIANG SHICHUN

**T**HE new era of Sino-American relations, for which Edgar Snow did so much, brought back many memories of him to my mind.

I met Edgar Snow and his first wife, Helen Foster, at the home of a mutual friend and colleague on the campus of the former Yanjing (Yenching) University in Beijing (Peking) in February 1934. At that meeting we had a rather heated though friendly discussion about the United States' silver policy\* which ended, however, with a mutual respect for each other and an invitation from the Snows to visit them in their newly-rented house in the nearby market town of Haidian.

My wife and I were warmly welcome not only by the Snows but also by their over-affectionate dogs, the dignified Gobi and Ginger, a tiny pup who jumped off and on our laps. I became a frequent caller at the Snows' and a warm friendship grew up between us.

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**LIANG SHICHUN** (Hubert S. Liang) is a professor of English in Nanjing University.

Late in 1935 Yanjing University invited Snow to give a course on feature writing in its department of journalism. This gave Snow an excellent opportunity to come into contact with some of the patriotic, alert and progressive young people of north China. And these young people found in Snow a sympathetic, wise and trustworthy friend.

Japanese imperialism had already occupied northeast China and the threat to north China was mounting. By their suggestions and advice the Snows made an important contribution to the December 9th Movement\*\*, which began among the students of universities in Beijing and spread to nationwide resistance.

In June 1936 Edgar Snow began his historic journey to the revolutionary base centered around Yanan. Preparations had to be made in secret and I was one of the few to know he was making the trip. When he and Helen returned to Beijing several months later they came to spend the night with us. He talked till dawn telling us his experiences and impressions. A

number of meetings were arranged on the Yanjing campus and in the city in which he told of his trip. His first-hand information was indeed an eye-opener to all who heard him. It broke the blockade on news about the Chinese Communists imposed by the Kuomintang government, which for years had kept people in the dark. His authentic first-hand information not only helped open the eyes of many Chinese people but, and more important, gave them courage to fight against Chinese

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\*The United States government in 1933, embarked on a policy of buying 24,421,410 ounces of silver per year in the international market over four years as a measure to raise the price of silver and thus control Chinese currency which was based on silver.

\*\*The December 9th Movement of 1935 began with demonstrations by Beijing students to protest against a Kuomintang government plan to set up an autonomous government for north China, which would have become a puppet for the Japanese. The students demanded a united front to fight Japan, as had been called for by the Chinese Communist Party. It spread to students in other cities and soon brought together people in all walks of life in a movement to resist Japan.

reaction and Japanese aggression. It provided them with a glimpse of the shape of things to come in a strong, independent, democratic and progressive China, a China in which the people were truly masters of their own fate.

In order to provide a medium through which Snow's information and other material could be disseminated nationally and internationally a group of us Chinese and foreigners in Beijing started publishing a magazine in English, under the name *Democracy*. It called for a united front for resistance to Japan and for democracy within the country. The magazine published only six issues because its activity was terminated by the Japanese invasion of north China. But it aroused keen and widespread interest in China, at least among her intellectuals, and won commendation abroad. In the launching and editing of this magazine Edgar Snow and Helen Foster deserve a great share of the credit.

**I**N the spring of 1938 Edgar Snow and I were both in Shanghai. That spring he and Helen Foster

together with Rewi Alley and others conceived the idea of the Chinese Industrial Cooperatives, or Indusco for short. This, the "Gong He" (work together) movement, which set up small local industries to help the people overcome the ravages of war, made a contribution to China's economic resistance to Japan and showed in a more significant way than generally realized how economic democracy could be built in a country like China.

I well remember the meetings we had in the Tai Xing Apartments, then the Medhurst Apartments, where the Snows were living and how these two dynamic young Americans were trying to win converts to the idea of the cooperatives. How well I recall the dinner we had at the Jin Jiang Restaurant to officially launch Indusco, with all of its initial sponsors present. It was a truly international united front gathering attended by those two Americans, an Englishman, a New Zealander and several Chinese, with Snow and myself presiding.

After the so-called Chinese part of Shanghai fell to the Japanese

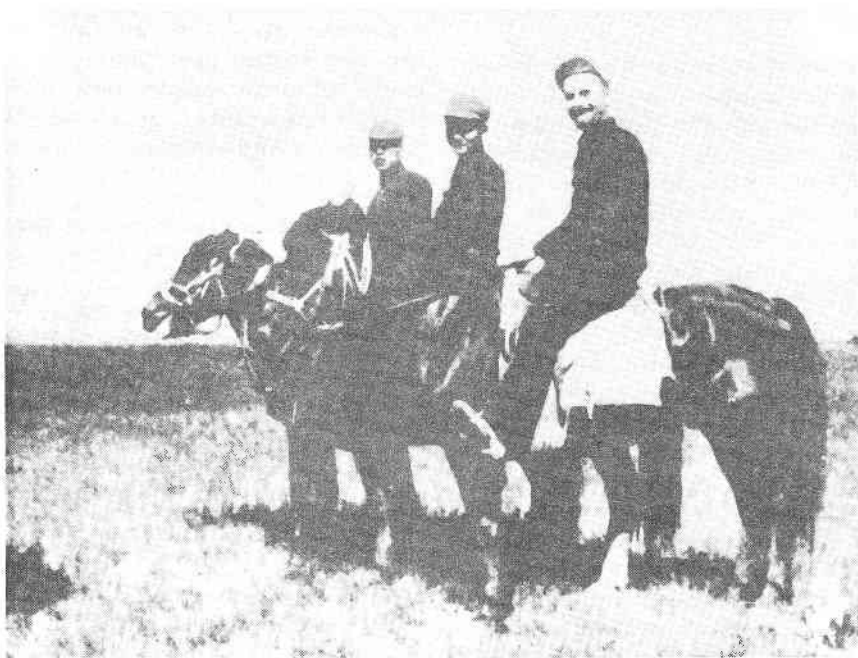
we had to carry on our anti-Japanese activities in the then International Settlement or the French Concession. We had a club called the Tuesday Evening Supper Meeting as a camouflage and clearing agency. Its weekly meeting was secretly attended by Chinese in various walks of life. Edgar Snow enjoyed the distinction of being a standing guest-member of this meeting. We often invited him to give reports or talks to it. At this time 50,000 copies of his book *Red Star Over China* were published in Chinese in Shanghai for circulation to the rest of the country.

In July 1938 Snow and I boarded a German steamer for Hongkong, the first leg of our journey to Hankou, which could only be reached by plane from Hongkong, as the Japanese had taken Nanjing. On board ship we had long talks about the Sino-Japanese war, the international situation as a whole and Sino-American relations. As to the latter and those between the American people and the Chinese people, he had a long-range vision and objective of co-operation, a view to which I fully subscribed — the sort of relationship these two countries and two peoples should and must have, not only for their respective good but in the interest of enduring world peace and of a new progressive culture, and the building of that culture in both China and the United States. In this he felt the American people and the Chinese people would both have major roles to play.

Our conversations on this topic continued over a long period of time, in Baguio in the Philippines where we later met and still later in New York City.

Now that relations have been normalized, and our two peoples are moving closer to each other in many a respect, were Snow alive today I think he would be very happy to see things going the way they are between our two great countries and two great peoples.

Edgar Snow in north Shaanxi province, 1936.





Mount Qomolangma photographed at an altitude of 10,000 meters.

Xinhua

## SCIENCE

# When the 'Roof of the World' Was Formed

ZHENG BENXING

**T**HE Qinghai-Xizang (Chinghai-Tibet) Plateau, the highest and largest in the world, was formed only a few hundred thousand years ago. This makes it the youngest highland on earth. It averages about 5,000 meters above sea level. On its southern edge is Qomolangma Feng (Mount Jolmo Lungma) at 8,848 meters, the world's tallest mountain. In the early Tertiary Period 40 million years ago, however, this entire area was the bottom of a great sea. When did it emerge out of water and begin to rise? How did this influence the climate and nature?

The mysteries of the "roof of the world" had few answers before 1949. In the early 50s the Chinese Academy of Sciences of the new people's republic began to organize expeditions to the plateau. The largest was a 1973-1976 general survey by a team of 400 scientists from 50 different fields. Working in almost every county and district of Xizang, it collected large numbers of valuable specimens and much data for analysis and study. Some basic conclusions concerning the formation and growth of the plateau are now possible.

### Former Hills and Waters

Studies of the plateau's marine bed show that some parts of the highland rose out of water early, others late. Toward the latter part of the early

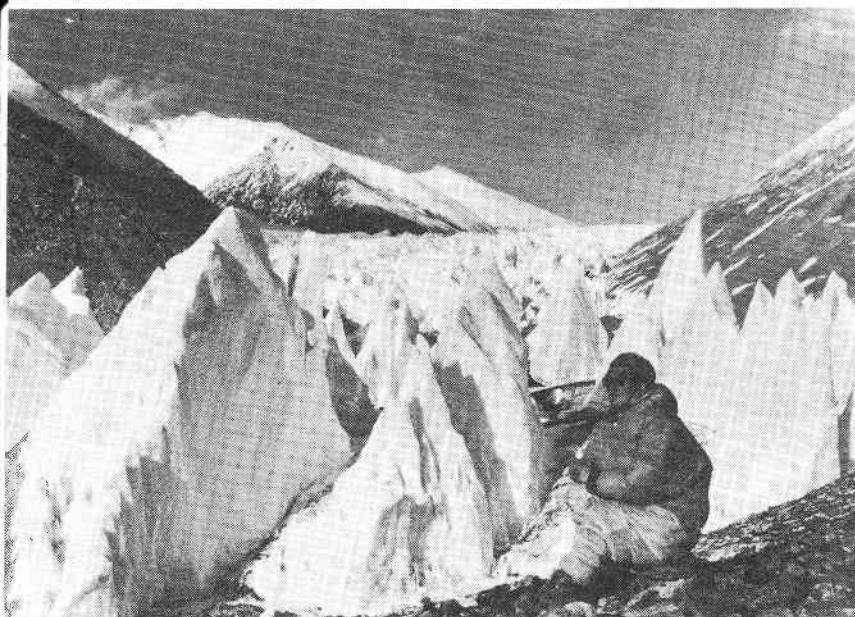
Permian Period, about 282 million years ago, the sea bed began to emerge from north to south. By the early Tertiary Period, southern Xizang still had bays connected with the Indian Ocean. Not until the middle Eocene Epoch 38,000,000 years ago did the whole area become land.

In the Pliocene Epoch the area was characterized by green hills and waters. Since the limestone belts in southern and northern Xizang had long been eroded, the topography was similar to the karst areas in south China today. The region was still less than 1,000 meters above sea level. Caverns on the cliffs, jutting peaks, deep fissures, sinkholes and underground streams looked very much like the scenery of Guilin (Kweilin) today.

### The Himalayas Rise

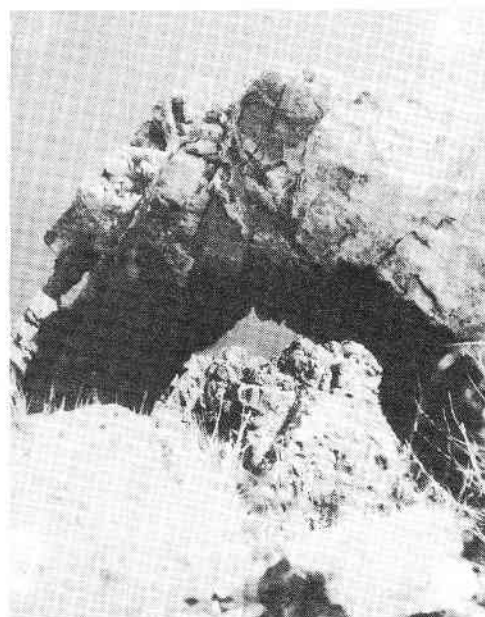
From early Tertiary Period to the Miocene Epoch, the Qinghai-Xizang region was a large plain with no Himalaya or Kunlun mountains. By the middle of the Miocene Epoch the strong mountain-forming movement of the Himalayas had radically changed the terrain into many fissured basins and mountains. At the same time the entire region was slowly rising. However, continued crustal movement destroyed those mountains and filled in the basins until by the end of the Pliocene Epoch the plain was restored with only a few mountain ruins left. The climate was humid and warm; and dense forests flourished—a typical tropical and subtropical scene. At the foothills

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Between two slopes is a drift flat on Mount Xixabangma formed in the glacial period of the early Pleistocene Epoch.

Shi Yafeng



A karst arch.

Shi Yafeng

were conifers and broadleaf trees such as ceteleeria and deodarceders. On the mountains gr̄w oaks, spruce and firs. Thick forests and meadows covered the plains. In the early Pliocene Epoch herds of three-toed horses (*Hipparion tibetensis*) and rhinoceroses (*Chilotherium tanggulacnis*) could migrate directly to the Indian plain. In the middle of the epoch three-toed horses (*Hipparion chilongensis*), rhinoceroses (*Chilotherium tibetensis*) and giraffes (*Palaeotragus microden*) in the Jilong Basin, according to the fossils discovered there, were similar to animals in northern and northwestern China at that time. Sporo-pollen analyses prove that the Himalayas were 2,000 meters above sea level then, 1,000 meters above ground level, and had become an obstacle for three-toed horses to cross to the subcontinent.

### Monsoons and the Glacial Epoch

Before the Pliocene Epoch, the Qinghai-Xizang region was low and flat and did not impede the latitudinal flow of the atmosphere around the globe. Later, the upthrust enabled the region to receive more intense solar radiation and made it a center of both "heat sink" and "heat source" which promoted the circulation of vapor between land and sea. Thus studies show, monsoons began to appear when the plateau had risen to 1,300 meters. In the summer, wet monsoons from the Bay of Bengal blew into the highland directly, and those from the Pacific reached northward as far as Nei Monggol (Inner Mongolia). In the winter, the cold air from Siberia attacked the eastern Asian continent. The higher the plateau grew the stronger the monsoons became, which greatly influenced the natural conditions of Asia.

In the Quaternary Period, with the uplift of the plateau and the changes in climate, glacial ages alternated with interglacial ages on the highland. In the early Pleistocene when the peaks of the Himalayas

began to reach beyond the snowline, small ice caps and piedmont glaciers were formed. By the middle of the epoch the mountains' continued upthrust reduced the atmospheric temperature and greatly increased precipitation, favoring the development of glaciers. Piedmont glaciers 34-40 kilometers long and high-basin ice caps several thousands of square kilometers in size began to appear. Toward the latter part of the middle Pleistocene in an interglacial stage the weather became warmer and moist, melted ice water deepened the rivers around the glaciers and enlarged the lakes on the highland. Broadleaf and deciduous forests grew around the lakes and mixed forests of conifers and broadleaves on the mountains. Many karst caverns formed in the valleys, and "stone forests" developed on the hillsides. A mantle rock of laterite and red fossil soil was formed. The plateau was still only 2,000-3,000 meters high.

### Continuing Upthrust

A strong upthrust occurred in the highland between the middle and the late Pleistocene. The old chasms reappeared along with new ones. Magma was active and hot springs were everywhere. Fine sulphur ore was formed at the foot of mountains. When the plateau reached 4,000 meters, the Himalayas towering in the south began to block the wet Indian Ocean monsoons from entering the plateau. The weather became cold and dry and there was very little precipitation above the snowline. The glaciers stopped growing and even became smaller. Former maritime glaciers became continental ones. The thick forests were replaced by wild grasslands. Though the interglacial period came, the climate here changed little because of the upthrust of the plateau. An exception was a north-south valley at the southeast corner of Xizang. It enabled the monsoons from the Bay of Bengal to blow northward with large quan-

titles of rainfall which brought on a dendritic glacier 100-200 kilometers long and ice caps covering several thousand square kilometers.

During the post-glacial stage, even in the recent epoch of 6,000-3,000 years ago, most of the glaciers developed on the mountains. In northern Xizang the plateau's permafrost formed in the glacier stage of the late Pleistocene Epoch and has remained until today, varying only in the depth and limits of the seasonal activity of the frozen earth.

### Northwest China Deserts

In the early and middle Pleistocene Epoch the Tarim and Qaidam basins north of the highland held great lakes. The reason was that the heavy rainfall brought by the monsoons melted the ice on the surrounding mountains and the weather was humid. Toward the latter part of the middle Pleistocene Epoch, however, with the upthrust of the plateau and the Tianshan Mountains, rainfall became much less, the melted runoff of the glaciers dwindled and the climate became dry. Strong winds blew away the minute particles of soil at the foothills to form high sand dunes, while the remaining hills became desert. Still smaller particles were blown to north and north-

west China where they became deep layers of loess. Rivers dried up or changed course.

### Man Conquers Nature

The upthrust of the Qinghai-Xizang plateau greatly changed the climate of eastern Asia and the whole continent. The Chinese people, slowly adapting to and mastering nature as it changed, have developed a great variety of local products. The hot, dry weather of the Xinjiang Uygur (Sinkiang Uighur) Autonomous Region makes the *Hami* melon more fragrant and sweet. The high mountains and deep valleys of southeastern Xizang show a clear vertical plant zone ranging from rice, bananas and apples at the lower levels to the perpetual snow on the mountains above. On the plateau, because abundant sunshine helps photosynthesis, a turnip or cabbage

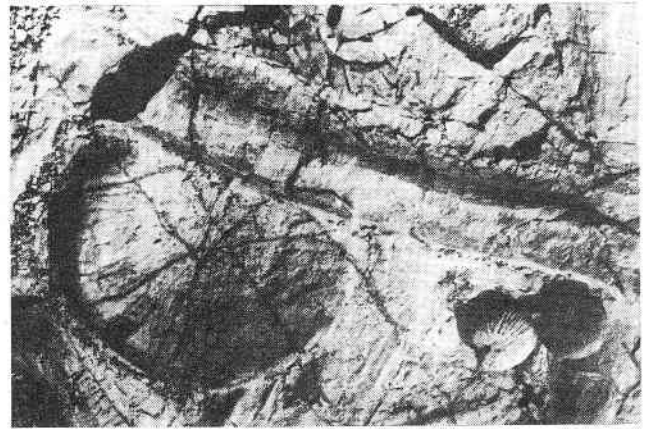
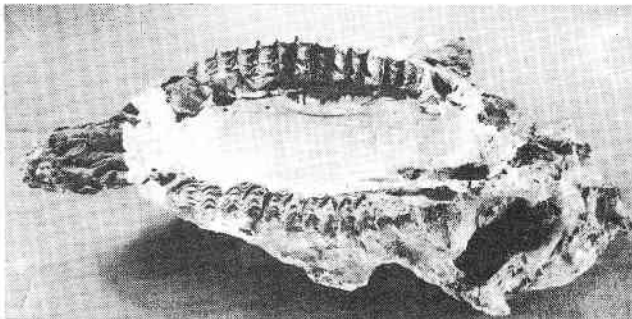
Scientists hunting for animal fossils of the Pliocene Epoch (10,000,000 years ago) in Jilong county on the south slope of the Himalayas.

Xinhua



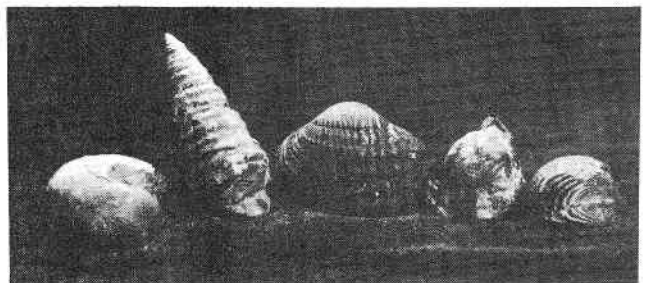
Upper jaw of a three-toed *Hipparion*.

Xinhua



Fossil of an ichthyosaur (with 2.4-meter ribs and back bone) and *Ammonoite*.

Xinhua



Fossils of *Brachiopoda*, *Bivalve*, *Gastropoda* and *Ammonoite* of the Mesozoic Era.

Xinhua

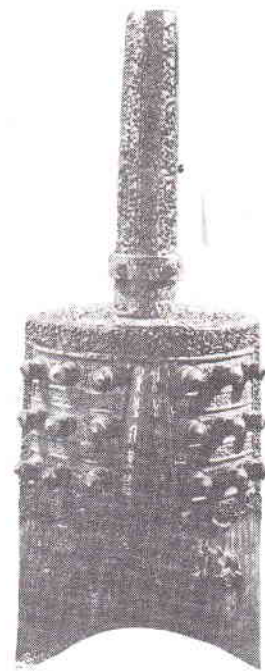
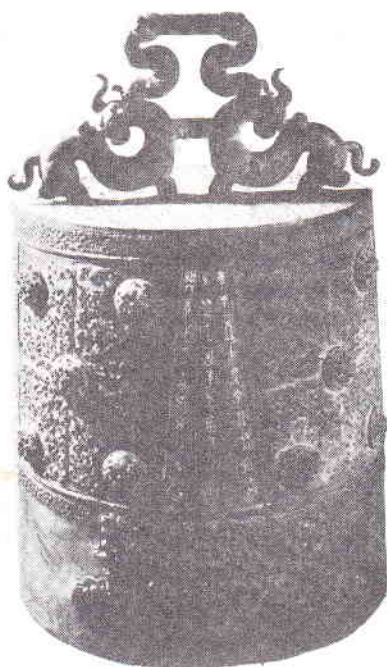
may weigh several kilograms. *Qingke* barley has been adapted to growth in fields as high as 4,700 meters above sea level, a feat rare in the world.

In this arid heartland of Asia people are trying to transform the deserts into oases with water melted from snow and ice in the mountains. Shelter belts now prevent windstorm damage. The deep frozen earth cannot stop people building up the plateau. In once uninhabited northern Xizang new towns are rising. Agriculture, industry, animal husbandry and communications are growing.

# Rare Find of Ancient Instruments

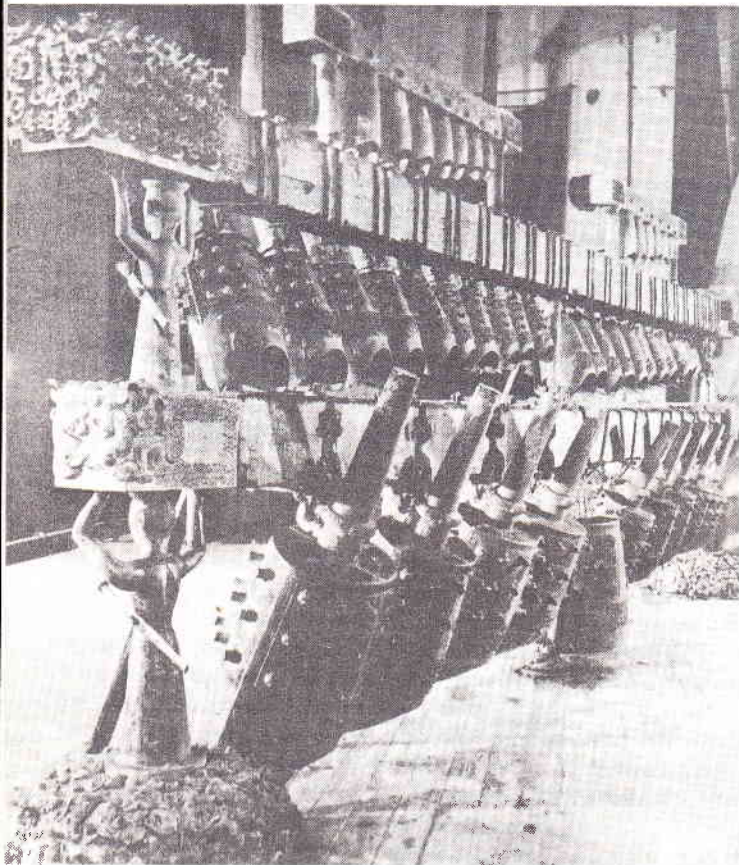
WU ZHAO

A chime from the set presented by the Duke of Chu, placed in the grave.



A large-size chime-bell.

A section of the chime bells.

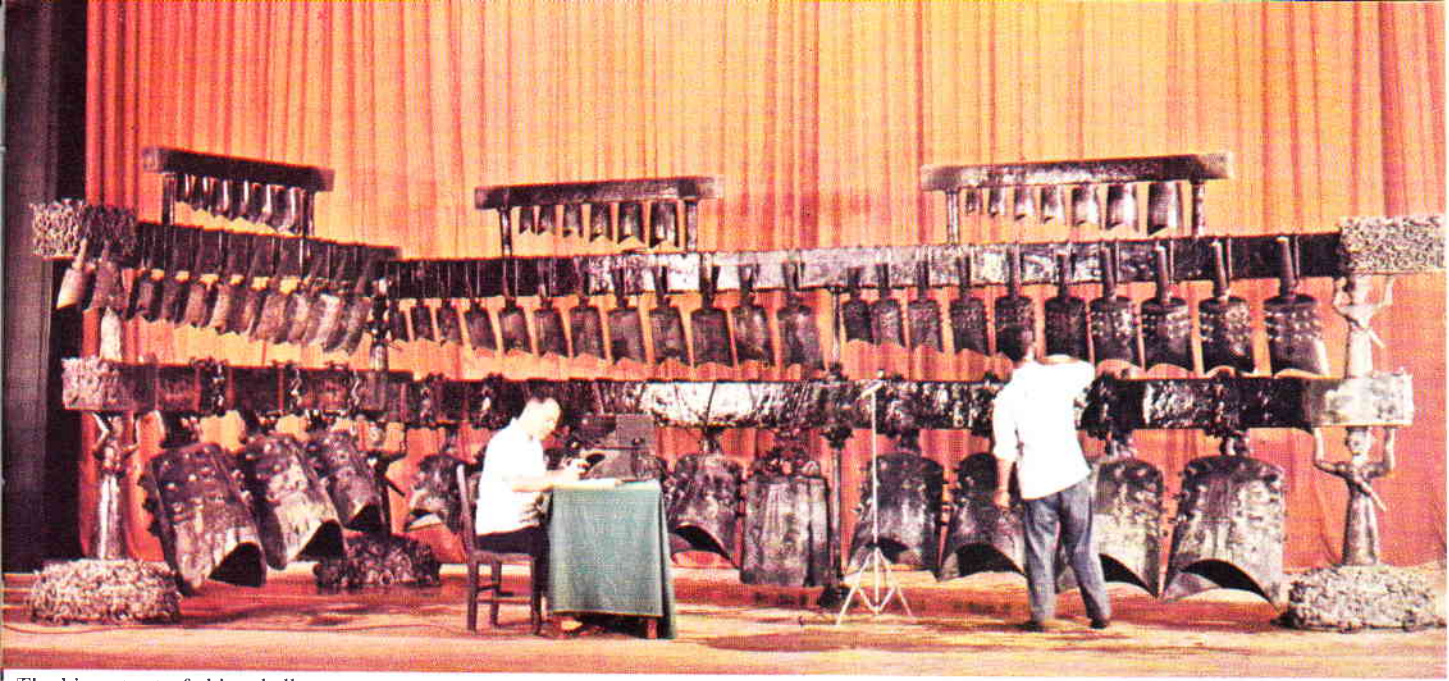


**T**HE Marquis of Zeng must have liked music. At least a great many musical instruments were buried with him when he died in 433 B.C. Unearthed recently, they are a rare find in tomb excavation. There were 124 instruments of 8 kinds, including a large set of bronze chime-bells, drums, *qin* and *se* (both zither-like instruments) and others among a total of 7,000 tomb relics. Many inscriptions provide new facts on the music of the time.

Marquis Yi was head of Zeng, one of several small states during the Warring States period (475-221 B.C.). His tomb was found last May on a hill 2.5 kilometers northwest of the Suixian county town in Hubei province. The largest room of the 4-chamber tomb (total floor space 220 square meters) was arranged like a feast hall. In the southern portion were about 100 utensils including bronze pots and wine containers, many of them with intricate designs or inlay, works of art in their own right. The musical instruments were found along the west, north and south walls.

A huge set of 65 chime-bells was hung on an L-shaped structure along part of the south and west walls, 7.48 meters long on the west and 3.35 m. on the south. They were hung in three rows on frames nearly three meters in height. They include 19 small

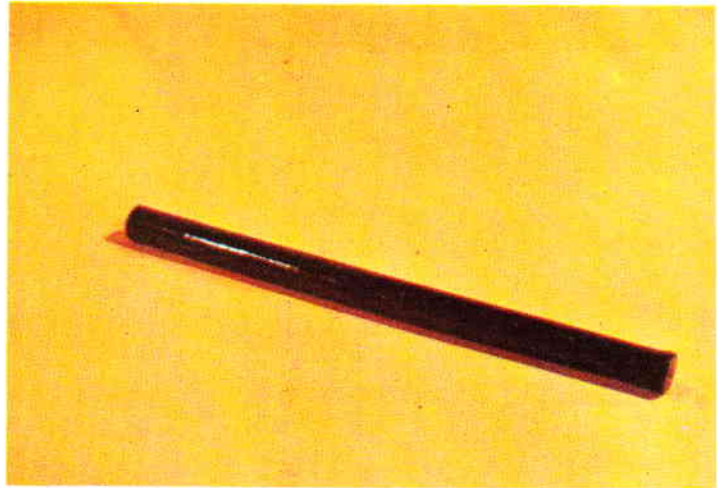
**WU ZHAO** is a member of the Chinese music history department of the Musical Research Institute under the Research Academy of Literature and Art.



The biggest set of chime bells.



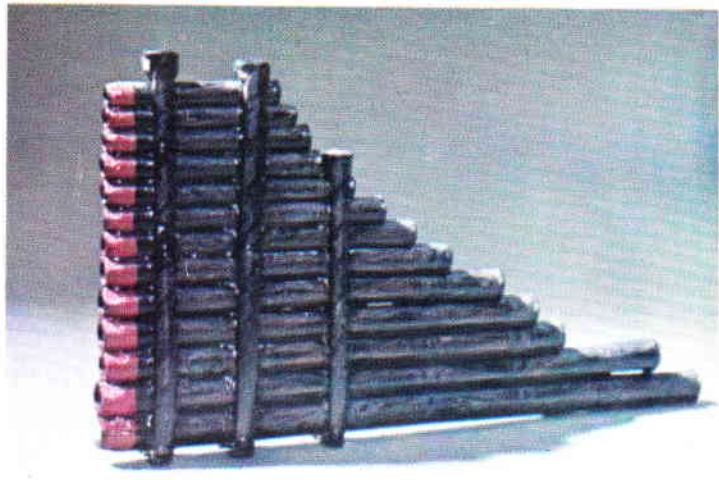
Drum.



Bamboo flute.



Sheng with pipes dismantled from the holes.



Pan-pipes.



Five-stringed zither.



Ten-stringed zither.

Se, 25-stringed zither.





ones on the top row and 46 larger ones in the center and bottom row. The largest weighs 203.6 kilograms and is 153.4 centimeters tall. It is the biggest of its kind unearthed so far in China.

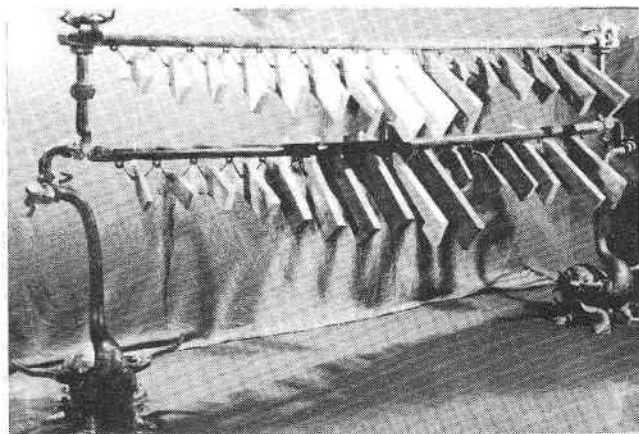
Along the north wall was a set of 32 stone chimes. Instruments for an orchestra included a big drum, seven *se* and three *sheng* (a wind instrument with pipes of varying lengths). There were also pan-pipes and flutes, both the earliest examples of these instruments to be unearthed in China. The two-octave pan-pipes have 13 tubes ranging from 5 to 22.4 centimeters in length. Two small drums to be used by dancers lay in the center of the hall.

### Giant Chime-bells

The small bells on the top row of the big set were apparently used to set the pitch for the instruments of the orchestra. The huge bells on the bottom row furnished the bass accompaniment, and the center row has bells in three sections, two soprano and an alto. This was more complicated than most sets of chime-bells of the time and was apparently used for several-part harmony.

We know from inscriptions in the tomb that after the death of the Marquis, the Duke of Chu — a larger state, sent a set of chime-bells for his funeral. As a token of respect to the Duke of Chu one chime-bell from the set was substituted for one in the set buried with the Marquis.

The structure of wooden beams on which the chimes are suspended was so well constructed that



The stone chimes.

*Photos by Yu Yiming*

through 2,000 years it did not give way under more than 2,500 kg. weight. The center and bottom rows are supported on the hands and heads of bronze warrior figures. The wooden beams are decorated with colored designs and have bronze endpieces with relief or openwork designs. Near the structure were found six T-shaped hammers and two thinner sticks for striking the chimes. Three musicians played the center row and two the bottom row.



Excavation of the chime bells: they stood there for more than 2,000 years.

Twenty-one human skeletons of young women in addition to that of the Marquis were found in the side chambers of the tomb, probably concubines, singers, dancers and musicians who had been buried alive.

### Inscriptions About Scales

The chimes were intended for use with a chromatic scale of twelve half-tones. On the beams are inscribed the tone of each chime on the scale in what is equivalent to the key of C. Tested at the Musical Research Institute under the Research Academy of Literature and Art the chimes were found to be true to tone and even after 2,400 years retain rich tone color and good modulation.

Two thousand characters of inscriptions on the back of the chimes give information comparing the musical symbols used in the State of Zeng with those in Chu, Qi, Zhou, Jin and other states. This will prove extremely valuable for the study of the development of the chromatic scale and the music of the different states during the Warring States period.



Even as a schoolboy in Shenyang, (shown above in 1910) Zhou Enlai was filled with a desire to save his country.

# Zhou Enlai in the May 4th Movement

HU HUA

Zhou Enlai when he graduated from the Nankai Middle School in Tianjin in the summer of 1917.

**T**HE anti-feudal anti-imperialist movement which began on May 4, 1919 brought the 21-year-old Zhou Enlai racing back from his university studies in Japan to play a leading role.

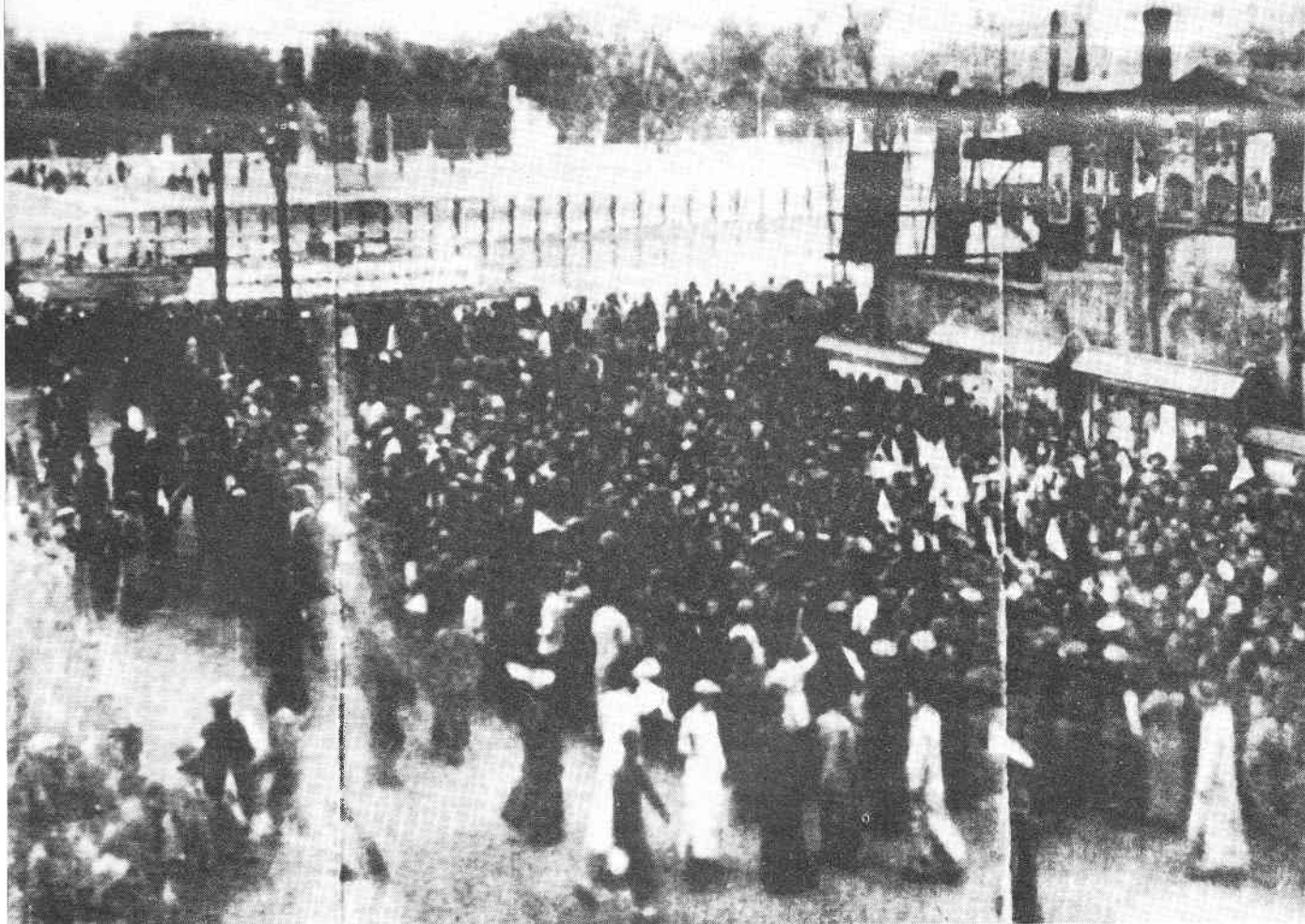
Earlier that year at the Versailles Peace Conference ending World War I, as part of the winning side the Chinese delegation had demanded the return to China of Shandong (Shantung) province which had been leased to Germany and the city of Qingdao (Tsingtao) and the Qingdao-Jinan rail line which Japan had seized from the Germans during the war. China had also asked for an end to the special privileges which imperialist countries enjoyed in China and the abolition of the 21 Demands imposed by the Japanese government on China's Yuan Shikai regime\* with the intention of reducing China to a Japanese colony. But the imperialist powers, Britain, France and others had a secret agreement with Japan and the United States delegation went back on its high-sounding principles, so the conference refused China's demands and transferred to Japan all German rights and privileges in Shandong.

In China news of the decision touched off a wave of strong opposition, particularly among the students. On May 4 more than 3,000 university

\* Yuan Shikai was a leader of the northern warlords. After the overthrow of the Qing dynasty monarchy in 1911 he seized the Presidency of the new Republic of China. He had agreed to 21 Demands in order to get Japanese support for his scheme to make himself emperor, which he did in 1916. His "reign" lasted only 83 days. Condemned by the whole nation, he was forced to abdicate and died soon afterward.

**HU HUA** is the head of the Chinese Communist Party History Department at China People's University in Beijing.





Tianjin students led by Zhou Enlai besieging the police station of the warlord government on October 15, 1919 after police prevented them from holding a demonstration.

students in Beijing (Peking) demonstrated in Tian An Men Square with the slogans, "Return Shandong to China!" "Don't sign the peace treaty!" "Abolish the 21 Demands!" and "Boycott Japanese goods!" They also demanded punishment for those in the government who had sold out the country, Cao Rulin, Minister of Communications, Lu Zongyu, Minister of Foreign Affairs who had signed the 21 Demands, and Zhang Zongxiang, the Chinese Ambassador to Japan. Students broke into Cao's residence, seized and beat Zhang and set the house on fire.

The movement spread rapidly through the whole country and aroused national feeling and the desire for democracy, which had been growing among some sections of the population since the October Revolution in Russia.

### Hatred for Feudalism

By the time of the May 4th Movement Zhou Enlai had already long been a student activist. Born in a declining feudal family in Jiangsu (Kiangsu) province, he was in grade school in the northeastern city of Shenyang, where he lived with an uncle, when the Revolution of 1911 overthrew the last Qing

dynasty emperor. The democratic bourgeoisie represented by Sun Yat-sen had begun to spread democratic and republican ideas. Influenced by a radical teacher of history and geography, the young Zhou had become interested in national affairs and developed a burning desire to save the Chinese people from their suffering and the humiliation to which the feudal ruling class had led it.

While attending Nankai Middle School in the city of Tianjin (Tientsin) he had begun to read the writings of progressive European bourgeois thinkers of the age of enlightenment, which strengthened his hatred for China's feudal ethics. With fellow students he organized the *Jingye Lequn Hui* (Study and Friendship Society) for discussion of current topics. They started the magazine *Jingye* (Study) for which he frequently wrote articles condemning feudal despotism and the mental fetters of feudal ideas and superstitions.

The group was much influenced by the magazine *New Youth* started in 1915 by Chen Duxiu (Chen Tu-hsiu) and Li Dazhao (Li Ta-chao). Advocating democracy and science, they criticized the teaching of Confucius, which had been the bulwark of centuries of feudal regimes and launched a movement for a

new Chinese bourgeois-democratic culture to replace the old feudal culture. The political and ideological inroads made by *New Youth* on the old feudal ethics were to pave the way for Marxism-Leninism in China and for the May 4th Movement.

Zhou had been extremely active in the new culture movement, speaking and writing articles and poems for newspapers and magazines. He also organized his schoolmates to go out to investigate things in society. He helped found an amateur drama group which performed skits exposing the feudal "virtues" for what they were. At a time when men and women were not allowed to appear on stage together, Zhou volunteered to play the female roles and did so very successfully. The troupe became quite well known.

On graduation from Nankai Middle School in 1917, Zhou had gone to Japan for university study. There, after the victory of the October Revolution in Russia, he had first come into contact with Marxism and began to study socialist trends in Japan.

### Student Leader

After Zhou arrived back in Tianjin the Tianjin Students' Union decided to publish a newspaper in June 1919, the *Tianjin Students' Union Bulletin*, to help direct the movement, and asked Zhou to head it. The young editor often found himself pitching in to do everything on the twice-weekly paper, including handling of advertisements from some patriotic companies. For the first issue on July 21 he wrote an editorial "Transform Our Minds and Transform Society" in which he pointed out that to reform society one must first change one's old ideas. The paper's popularity increased until its circulation reached 20,000 copies. It became a leading force in north China in the anti-Confucian struggle which was one of the currents in the May 4th Movement.

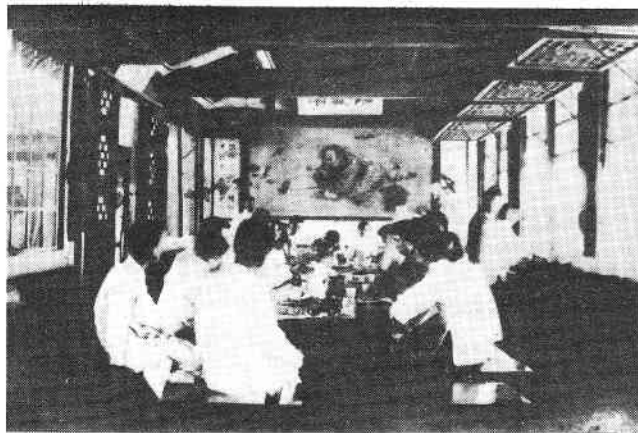
### The Awakening Society

The actions of the Beijing and Tianjin students set off great political strikes in Shanghai, China's largest industrial city, against the warlord government and Japanese imperialism. With such struggles as background, in August Zhou put forward the idea of the radical transformation of society as an objective for the student movement. He urged the leaders of various student groups to go out and rouse the students and the masses and not wait till the corrupt government slaughtered them. He urged uniting all who shared this desire to carry on struggles and put out magazines to publicize their calls and unite the common will.

With members of the Study and Friendship Society, March 1911. Zhou is at the far left.



The meeting that forged student unity at a pavilion in Taoranting Park on August 16, 1920. Zhou is far front, left.



Agreeing with Zhou's proposal, the student leaders set up a nucleus to lead their activity which they called the Awakening Society, and began to publish a magazine known as *Juewu* (Awakening). At first, on the principle of equality of the sexes, the society consisted of ten men and ten women representatives, including Deng Yingchao, who was later to become Zhou Enlai's wife. This was one of the first times in China that women fought shoulder-to-shoulder with men to break the shackles of feudal ethics.

### The Boycott and Arrest

One method of protest was to institute a boycott of Japanese goods. The Students' Union had a committee to enforce it by burning Japanese goods. On January 23, 1920 the committee learned that some merchants were secretly concealing Japanese goods and went to investigate. The merchants got Japanese thugs to beat up the students. A delega-



Arrested student and citizen representatives after their release from prison on July 17, 1920. Zhou is second from right in the fourth row.

tion of 24 representatives of students and citizens of Tianjin went to the government to protest this outrage. They were all arrested.

On January 29 Zhou Enlai, who was then heading the Students' Union, led some 1,000 students to the office of the governor of Hebei (Hopei) province. They demanded release of the arrested representatives, reopening of the Students' Union office which had been closed by the warlord government, freedom to boycott Japanese goods, freedom of assembly and association for the people, abolition of the unequal treaties between China and Japan, and that the warlord government not negotiate directly with Japan over the Shandong question (they were afraid it would capitulate and wanted negotiation by a disinterested party).

The governor locked the gate to his office and would not let them in. Regardless of danger to their lives, Zhou and three other students crawled in under the gate to try to talk to the governor. They were arrested. The demonstrators outside were severely beaten by police with guns, swords and clubs. Many were injured, some crippled for life.

### Struggle in Prison

Zhou Enlai continued to struggle in prison. The police held them for months without trial and without a charge. Early in April the jailed students went on a hunger strike to demand freedom of action in jail and that they be brought to trial. A few days later the police transferred the students and 21 others who had been similarly arrested to a prison for civil offenders under the public prosecutor's office.

Zhou used the greater freedom the prisoners had in this new place to organize them for further struggle and for study. Those who were able gave

courses in economics, psychology, history, law, English and Japanese with examinations every two weeks. They often held meetings to discuss political, academic and social problems. Zhou himself taught English and Japanese and gave talks on the life and writings of Karl Marx. He worked energetically to introduce Marxism, though at that time it was regarded as "extremism" and called "as dangerous as floods and wild beasts."

On July 6 the court was forced by pressure from society to bring them to trial. On the third day Zhou and his comrades had their turn to speak. They exposed to the 500 people who had crowded in to watch the trial the reactionary government's crime of suppressing the patriotic movement. Zhou became the accuser and the government the accused. On July 17 all the prisoners were released into the hands of a cheering crowd outside the court. A delegation of Tianjin citizens presented them with medals with four golden characters reading "Devotion to the Nation."

### Taoranting Park Meeting

Zhou had become increasingly aware of the necessity of fighting both the feudal lords and foreign imperialism. On August 16, 1920 with other leaders of the Awakening Society he joined 23 representatives from four other youth organizations (Young China Society, Work-study and Mutual-aid Youth League, Dawn Society and Humanist Society) in a meeting at Taoranting Park in Beijing. There Deng Yingchao spoke on the formation and activities of the Awakening Society and Zhou explained the idea of uniting for social reform he had previously put forward for the Awakening Society. Professor Li Dazhao of Beijing University, who had become the

first to publicize Marxism in China, spoke urging that all young people unite for a common goal under the banner of socialism, and to go among the working people. After the meeting they issued a Manifesto for Unity and Social Reform which called on the youth to unite, go among the people and work to save the nation. Many members of the Awakening Society did as they were called on and went out among the workers and peasants. In December Zhou went on a work-study program to Europe, where he hoped to learn more about Marxism.

### In Europe

Early in 1921 Zhou was in Britain where a coal miners' strike was going on. He told their story in an article entitled "The British Coal Miners' Strike" which was published in the June issue of the *Yishibao*, a Tianjin daily newspaper. Zhou later worked in the Renault Automobile Plant and Lille Coal Mine in France, and from the German Ruhr wrote about the situation there for Chinese readers.

During this time he read in their original language many works by Karl Marx which had not yet been translated into Chinese.

In the winter of 1921 he organized a group called the Young Communist Party among Chinese students in Europe. After its first congress in Paris in June of the following year it tried to establish ties with the Communist Party of China, which had been founded in Shanghai in July 1921. The following winter the Central Committee of the Party asked the European organization to change its name to the General European Branch of the Chinese Communist Youth League. People, including Zhou, who had joined a Communist group in China before July 1921, subsequently formed the General European Branch of the Chinese Communist Party. Thus it was that Zhou Enlai became a member of the Party in June 1922. He became one of the leaders of its European branch and was chosen secretary of the Youth League general European branch. From that time on he devoted all his life and energy to the noblest cause in the world, the liberation of mankind.

In Berlin. April 1922.



# Yunnan's Yulong Mountains

## Snow-Capped Land of Legend

ZHAO JINGXIU

**T**WO days by car northwest of Kunming, capital of Yunnan province, along a section of the Burma Road, a round-topped crystal-like mountain thrusts up against the sky. This is Fan Mountain, highest of the 13 peaks in the Yulong range, which is a part of the larger Snow Mountain range of Long March fame. These mountains get their name, which means Jade Dragon, from the way the snow-capped, mist-shrouded range snakes its way from north to south through the Lijiang Naxi Autonomous County.

It is a marvelous paradox of nature that at 6,000-meter Fan Mountain, clouds which in autumn sometimes pile up to take the shape of galloping horses, can yet create an atmosphere of serenity against the deep blue sky. The flow of melting snow has etched the mountainsides into a myriad of varied scenes. One of these is the "Green Jade Screen," a cliff of deep green-shaded ice formed by layers of snow accumulating and melting over the centuries.

One of the most striking views is the reflection of Fan Mountain

in the lake with the sunrise casting a crimson glow upon it. The scene formed by these elements is known as "Reflection in the Jade Lake." Beside the lake stands a huge ancient orange tree which bears extremely sweet fruit. It is known as the Dragon Girl's Tree by the local people, who have attached to it this legend.

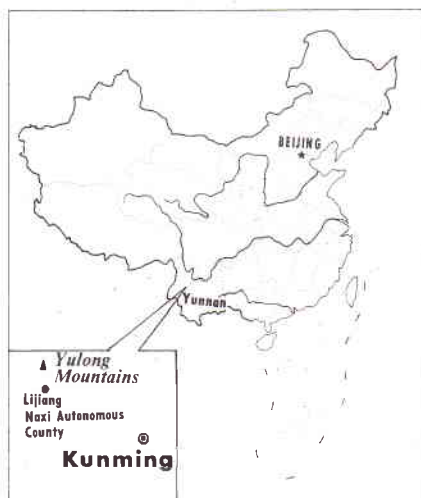
The daughter of Mu, a chieftain of the Naxi people, fell in love with a young shepherd and wanted to marry him. Thinking this free choice improper, the chieftain had the young man burned to death and imprisoned his daughter in a pavilion. She wept till she could weep no more and died of grief. The lake, it is said, was formed by her tears, and it rose till it drowned the pavilion. The next year an orange tree sprang up beside the lake. It was said that the maiden had turned into this tree.

### The Jinsha River

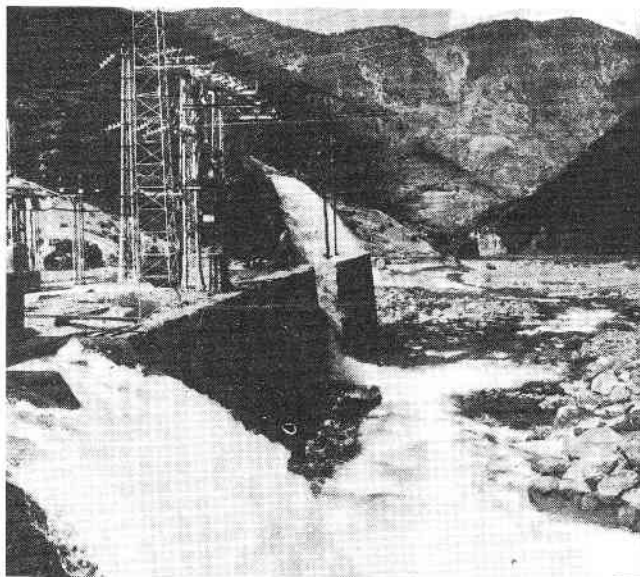
Another magnificent view is called "Where the Jinsha Flows Between Cleft Mountains." Jinsha, or Golden Sand, is the name given the upper reaches of the Changjiang (Yangtze) River. It is said that once, like its sister rivers



Tiger Leap Gorge.



**ZHAO JINGXIU**, of Naxi nationality, is on the staff of the Cultural Center of Lijiang Naxi Autonomous County in Yunnan province.



One of the many hydropower stations built in the area.



Members of a Naxi theatrical troupe.

*Photos by Shen Yantai*

which come out of the Tibetan highlands, the Lancang and Nujiang, the Jinsha flowed straight south. It used to spill over its banks and inundate the surrounding area. One day Yu the Great, the legendary flood controller of ancient times, passed by and saw how the people suffered from these floods. He took a great axe and made a cut in the mountains so that the river could flow northward before turning south again, thus ending the floods.

This point where the Jinsha crosses the mountains, known as "Tiger Leap Gorge" is one of China's famous gorges. It divides the Yulong Mountains on the east and the Haba range on the west. The cloud and mist-filled valley created by sheer perpendicular cliffs is penetrated by the sun's rays only at noontime. As the turbulent current passes through, it seems to be bursting through a narrow stone gate. At some places the gorge is only 30 meters wide. It is called Tiger Leap Gorge, as some say a tiger can jump that far.

About this valley too there is a tale. The Maid of the Jinsha River was to be married to the East Sea.

She set out from her home at the foot of the Bayan Har (Bayan Kara) Mountains on the Qinghai-Xizang (Chinghai-Tibet) plateau. The Old Man of the Yulong Mountains, hearing that she was very beautiful, wanted to seize her and force her to marry his son. He waited for her, lying on the Yunling plateau northwest of Lijiang to block her way. He waited seven days and seven nights, but the girl did not come by. He became very tired and dozed off as he lay there, with one knee up. The girl came along and, realizing he wanted to stop her, slipped quietly through beneath his knee. When she had crossed the valley she let out three peals of laughter, which turned into the three big falls on the river just downstream from where it turns north.

#### **Forests, Flowers, Herbs**

The Yulong Mountains are a famous forest region of pines and oaks. Every year thousands of cubic meters of logs are floated down the Jinsha for shipment by train or truck to other parts of China. Above 3,000 meters only tall firs grow, but with such thick trunks that two or three people can

link hands around them. The tallest are about 40 meters. They can be used for pillars for a 13-story building, if one should wish to build one.

The forest has many kinds of flowers. Most famous are its primroses, camellias and azaleas, the latter in several dozens of species in white, reds and yellows.

Yunnan province is known for its camellias, especially those growing in Lijiang. At Yu Feng Temple in the southern foothills of the Yulong Mountains stands the famous Camellia of Ten Thousand Flowers. This tree puts forth a new set of blossoms every few days from January to April, each time more than a thousand. It has ten trunks of 20-30-centimeter diameter which are twined together as solidly as a wall. The entire tree with its branches covers an area of 42 square meters.

Each flower is as big as a saucer, with 18 petals and 9 pistils. Some people compare their flaming red color to the shining vermilion of imperial halls, others call them "Lions' Heads" for their shape.

The Yulong Mountains are also a source of many rare medicinal

*(Continued on p. 43)*

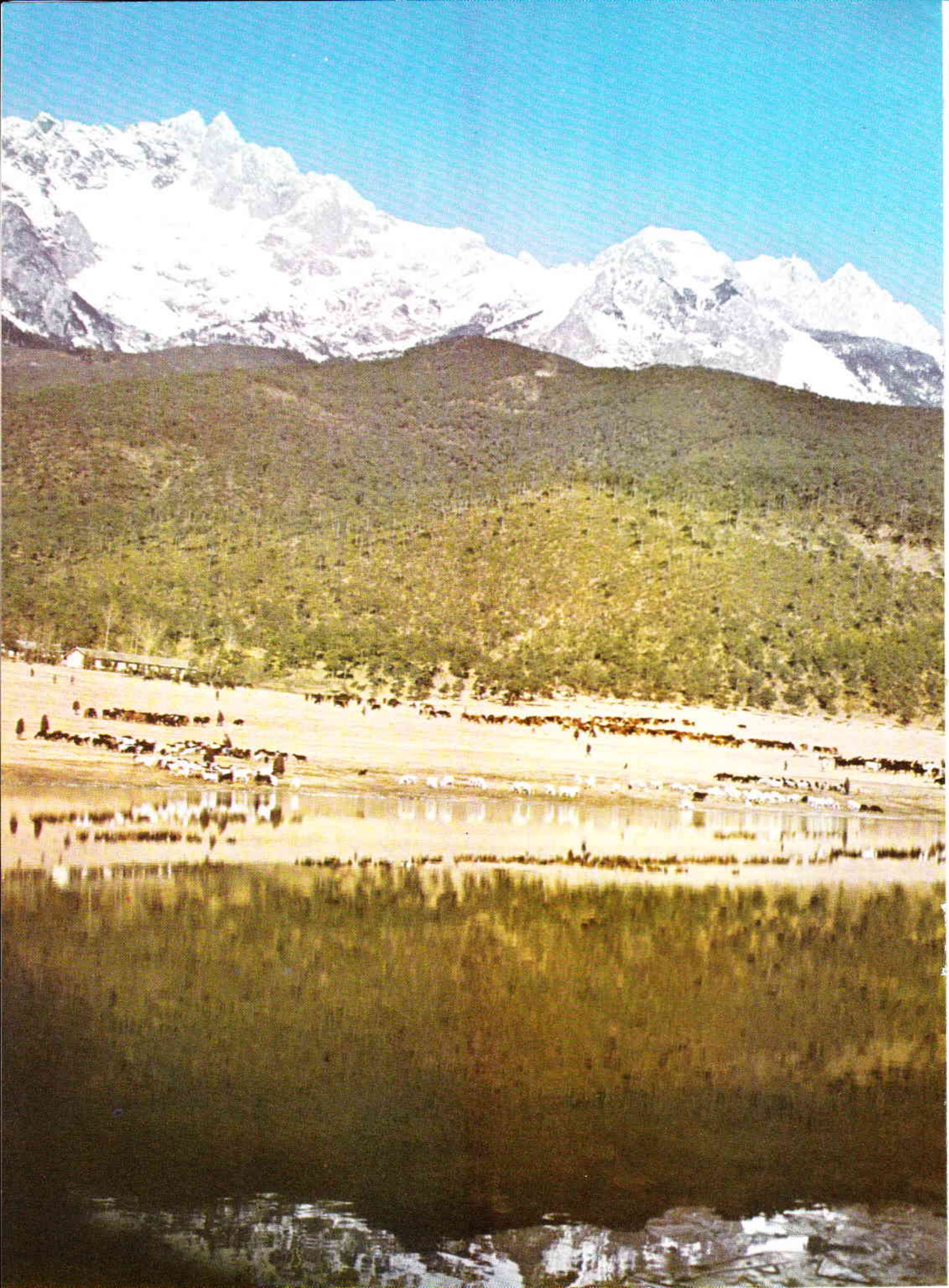




Blossoms of the Camillia of Ten Thousand Flowers.

Azaleas in the Yulong Mountains.







Murals from a temple of Mu Kingdom times.



Reflections in the Jade Lake, scene from Lijiang, Yunnan province.

*Photos by Hu Hanzheng and Li Chengyong*

THINGS CHINESE

# The White-Headed Leaf Monkey

WU MINGCHUAN



A white-headed leaf monkey and her young one.



Expedition camp in southern Guangxi.  
*Photos by Zhang Yiming*

**WE WERE** in a subtropical forest in southern Guangxi (Kwangsi). The early morning sun light was just touching the mountain peaks. A monkey jumped onto a big flat rock. Blinking its bright round eyes, it kept looking around like a sentinel. Its black body and snow-white head, neck and shoulders made it look like a little old man in a black jacket and white cap. Suddenly it cheerfully called out, "Ka, ka, ka..." A second monkey appeared, then another and another... until there were seven. They jumped, turned over and scratched themselves joyously while the first one still maintained his watch. These were the white-headed leaf monkeys (*Leucocephalus Tan*), part of the wildlife of the Guangxi Zhuang (Kwangsi Chuang) Autonomous Region in south China.

As a species of the *Preseytis* family of primates and one of the world's rare animals, the white-headed leaf monkey was first discovered in China in 1956. Our expedition found these monkeys only in the tropical and subtropical forests of the limestone belt in southern Guangxi. The climate is warm with plenty of rainfall. The topography is complicated,

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**WU MINGCHUAN** is a forester in the Guangxi Zhuang (Kwangsi Chuang) Autonomous Region.

with caves, cliffs, jutting peaks and dense forests and lush vegetation that make an ideal home for them.

The white-headed leaf monkey is an agile animal. Its long slender tail helps it keep its balance while it jumps around. It has a sharp sense of smell and hearing, and is always on the alert. It lives in groups. Whenever the group moves, a scout is sent ahead to make sure there is no danger. His signal brings the rest. If something unusual happens, his warning sends the group running to safety. Once when our expedition was trying to photograph them on a flat rock, one of us suddenly sneezed. The monkeys disappeared like shooting stars and for several days they could not be seen again.

The white-headed leaf monkeys feed on leaves and wild fruit. Each group is headed by a mature male. The rest are females and their young. When a young male matures he leaves his group and forms a new one. He stands guard while the others look for food, rest or play. A female matures at three or four years and bears a young one once a year. The baby's hair is soft and light yellow. After six or seven months it becomes black and white like the adults. The white-headed leaf monkey is popular in zoos and also the subject of scientific studies.

(Continued from p. 38)

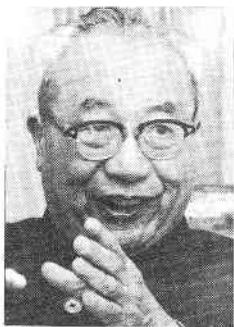
herbs. Two hundred years ago a book the *Yulong Ben Cao* (Materia Medica on Yulong) was compiled with drawings of 328 varieties of them. They include fritillary, cordyceps, cirrhosa, tree peony, dahuricum, rhododendron and ephedra. The area's yellow azaleas are not only a thing of beauty, but are useful in treating ringworm. After liberation a mountain plant research institute was set up here.

### The Naxis and Lijiang City

Below the mountains is a tableland which is a home of 100,000 people of the Naxi nationality. They were nomadic mountain hunters, who, according to legend, found this flatland while pursuing animals. They began to settle down in this area during the Warring States period (475-221 B.C.) as farmers, growing wheat and rice and living a life much like that of the Hans, the majority people of China. During the Yuan dynasty (1271-1368) when this area had already long been a part of China, an independent Naxi kingdom known as the Mu Kingdom rose here, which lasted until the second quarter of the 18th century. The Naxi kings exploited their own people and around the capital Dayan — at present-day Lijiang — they built luxurious villas, long covered walks and a deer park for their own enjoyment. Their palace and part of their walled city still stands today at Lijiang. The palace and temples contain many beautiful murals depicting stories from the Buddhist, Taoist and Dongba religion, the last the Naxis' own variety. The style of art is a mixture of Naxi, Han and Tibetan.

Since liberation the Naxis have made economic and cultural progress along with the rest of the country. The melting snows of the Yulong Mountains are a natural reservoir for irrigation as well as motive force for hydropower stations of small and medium size built in the valleys. These supply electricity to new factories as well as the wooden houses of the villagers and new construction in Lijiang.

# Revisiting the Mountains of the Yao People



The author

FEI XIAOTONG

LAST DECEMBER I went on a visit to the Dayao Mountains in the Guangxi Zhuang (Kwangsi Chuang) Autonomous Region on China's southern border. An old stamping ground of mine, it was here 43 years ago that as a university graduate majoring in anthropology I did ethnological investigations. I was utterly astonished by the changes that had taken place in the intervening years — changes so great that the best way to sum up my impressions is to say that I had come to a different land.

The Dayao Mountains were once contemptuously described as "beyond the pale of civilization." They have been the home of generations of Yaos, a people who in years gone by suffered all the hardships and humiliations of being a minority nationality under Han chauvinistic rule. In 1952, not long after the Chinese people liberated themselves under Communist Party leadership, the Yaos founded the Jinxiu Yao Autonomous County, thus becoming one of the first minorities in China to achieve local autonomy. The new aspect of things here today shows that in the family of peoples of

China any nationality, whatever its size or cultural level, can traverse in a few short years or decades the distance covered by other peoples in the world in hundreds, even thousands of years — once it gets rid of the forces of

exploitation and oppression that block its progress.

Discriminated against in the old China, far back in history the Yaos were driven into high, cold regions of the Nanling range. It is said that more than 2,000 years ago, during the Qin (Chin) and Han dynasties, their ancestors had lived on the plains around Dongting Lake on the middle Changjiang (Yangtze) River. A proud people with a tradition of fierce resistance to oppression, they refused to submit to the corvees imposed on them by tyrannical rulers. They chose instead to withdraw into the remote mountains and forests where they could live in freedom. Corroboration of this theory is found by some in the name "Moyao" (those who refuse to do corvee) — a term for the Yaos first seen in the *Liang Shu* historical accounts written in the Han language. Although today's

Pan Meiyong (right) of Yao nationality, a vice-secretary of Hexian county Party committee in Guangxi, works with commune members in the fields. *Xinhua*



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historians have certain reservations about this theory, the fact remains that the Yaos were forced into the mountains by the oppression practiced down through history by China's reactionary rulers.

A glance at the map, and the whole story becomes self-evident. Situated between the Liujiang and Guijiang rivers in eastern Guangxi, the Dayao Mountains cover an area of 2,300 square kilometers. In some places this region reaches an altitude of 1,900 meters above sea level. It is rimmed by a series of steep slopes and sheer cliffs that form an effective barrier between it and the surrounding plains.

My first expedition into these mountains in 1935 was done entirely on foot. Even horses were impracticable. The narrow, winding trails in the primeval forests and dense bamboo were so overgrown as to be almost indistinguishable. Because we lost our way I stepped into a tiger trap and was injured. My wife went back alone to get help, slipped while crossing a torrential stream and lost her life. Accidental as these misfortunes were, it was not accidental that generations of Yaos retreated and protected themselves behind natural obstacles such as these.

**T**HE Dayao Mountains are only one link in a chain of mountains that begins with the Nanlings in Guangdong (Kwangtung) province, passes through Guangxi and Guizhou, merges with the Hengduans in Yunnan and ends in the Indochina peninsula. Throughout this entire chain one finds stockaded Yao villages loosely scattered among the remote peaks and valleys.

The rugged mountains with soaring peaks hidden among the clouds contain swift-running streams radiating outward from the center. The largest of these is the Jinxiu River which flows into the Liujiang. It is after this river that the Yao people named their autonomous county. Along its banks are flats smooth enough to permit the planting of rice. Only



The author chats with a Yao family.

Zhang Ya

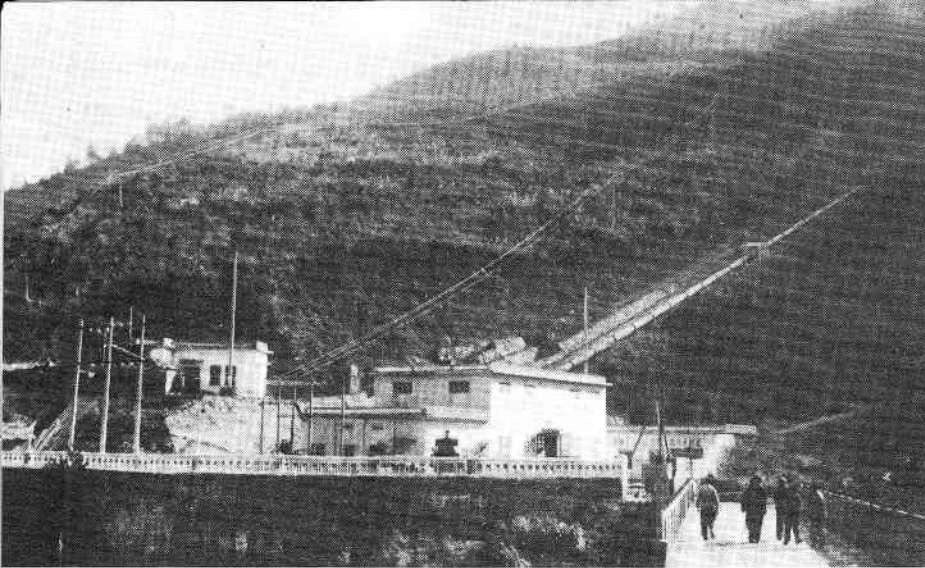
about 1,300 hectares of paddy fields existed in the whole region at the time of liberation, however, and the majority of the Yaos raised dry-land crops on about 6,600 hectares in the mountains by slash-and-burn methods. Harvests were meager.

The population of this mountain region at liberation numbered about 26,000, of which approximately 18,000 were Yaos. As compact Yao communities went, the one around Jinxiu was one of the largest in China. But it accounted for only 3.6 percent of the half million Yaos living in Guangxi, or 2 percent of the entire Yao population in China, for the Yaos characteristically lived in small, widely-scattered communities. The Yaos of Guangxi were spread over 60 or more counties, their numbers in each county varying from a hundred thousand or more to only a few thousand or a few hundred. Their villages were usually separated by several mountains. Even in the Dayao Mountains, walking from one village to another not infrequently took me a whole day when I first visited the region.

Living so widely dispersed, the Yaos differed markedly among themselves in language, social structure, customs, habits, religion, and even dress. These differences formed the basis of the various names by which they were known. Several dozen names exist for the Yaos. In the Dayao Mountains are five: Chashan (Cha Mountain) Yao, Ao (Col) Yao, Hualan (Flower Basket) Yao, Pan Yao (Descend-

ants of Pan Gu) and Shanzi (the Mountain Folk) Yao.

The relations between these different groups were quite complicated. The first three types mentioned above each possessed a stretch of mountains, including the forests, rivers and wildlife. Consequently they came under the general heading Shanzhu (Mountain-owner) Yao. Another name for them — Changmao (Long-haired) Yao, stemmed from the way their men-folk used to wear their hair — long and coiled on top of their heads. They dwelt on the flats along the rivers and made their living chiefly by cultivating paddy rice. This permitted them to settle down for successive generations, build permanent houses of timber and stone and congregate in relatively large communities — generally in villages of several dozen households. The last two types of Yaos mentioned above, on the other hand, had no land of their own. They were dependent on the earlier settlers — the Mountain-owner Yaos — for land, paying for its use in kind or in labor. Since their cultivation methods consisted chiefly of the slash-and-burn variety, soil fertility was exhausted in a few years and they had to look for new land. Unable to settle down and always on the move, these people could build nothing better than crude bamboo huts. They were called Shanding (Mountain Tenants) Yao or Guoshan (Mountain-passer or Migrant) Yao to denote the fact that they



One of the many hydropower stations in the Jinxiu Yao Autonomous County.  
*Zhang Yan*

had neither land nor permanent abode.

Subject to such exploitation, the Migrant Yao lived in dire poverty. During my first visit to the Dayao Mountains I lived for a time under the same roof with some of them. Chilly drafts blew through the chinks in the walls at night, meals consisted of corn and wild plants, whole families slept under one ragged quilt, and even adults had insufficient clothing to cover their nakedness.

The presence of such inequalities between the different groups, all of which bore the name Yao, leads one to the conjecture that the reason lies in the sequence of their arrival. Successive waves of latecomers were probably left with no alternative other than primitive farming in the more inhospitable areas, rejected and discriminated against by the established communities of earlier arrivals who already had taken possession of the better land. The birds in the sky and fish in the rivers all belonged to the Mountain-owners and were forbidden to the Migrants. The latter dared not even walk with their heads up in the streets of the Mountain-owner villages.

**T**HIS inequality among the Yao groups was instrumental in bringing about class differentiation among the Mountain-owners themselves. Traditionally these Yaos had been governed by a

“tablet” system under which the inhabitants of one or several villages banded together and erected a stone tablet engraved in Han writing with the rules and regulations to be observed by members of the group. Apparently a sort of social pact, this set of rules defined rights and prerogatives within the group; the social order, customs and practices to be maintained; and the sanctions imposed for infringement or violation of these rules. Each tablet group appointed a headman to enforce the discipline outlined by the pact—the appointments originally taking place by public consensus under a sort of primitive democracy. On the basis of these small groups larger ones were formed which went by the names Big Tablet and Grand Tablet. The Grand Tablet encompassed all the Yao groups in the Dayao Mountains and its headman was known as the “King of the Yaos” by outsiders. How the groups merged into larger units has not yet been clearly determined.

Historically speaking, this system of organization once played a positive role where the survival of the Yao nationality was concerned, but it also perpetuated the unequal relations between the Mountain-owner and Migrant Yaos as well as a host of backward customs. Moreover, the headmen, in later times only nominally elected by public acclaim, acquired the right to levy land rent and corvée from

the Migrants, and eventually kept these rights in permanence, using them to increase their own wealth. Thus a minority of exploiters appeared among the Mountain-owners, and the fact that they possessed more wealth than their neighbors touched off a rich-poor polarization process within the group itself. Poorer members began to rent land from the richer members and, with the advent of feudalism, the headmen developed into a feudal landlord class.

Thus the complexity and involute nature of the ethnic and class relations in the old Dayao Mountains can well be imagined. Inside the mountains on the one hand contradictions developed among the Yaos themselves. Outside the mountains on the other hand contradictions grew between the Yaos and the Hans and Zhuangs. And within the mountains there were also the contradictions between Mountain-owner and Migrant Yaos.

Although all these contradictions were essentially of a class nature, they expressed themselves mainly in the form of contradictions among nationalities. These complicated social relationships all centered on one simple historical fact—that the thousands of Yao people had been slowly driven into these high and cold mountains and reduced to a permanent poverty and backwardness.

This situation had lasted at least 1,000 years. The discovery of Tang dynasty (A.D. 618-907) coins in the forests of Jinxiu recently, as we are told, is evidence that migrations into the mountains may have been taking place even in those early times. The epilogue to this chapter in history began in the 40s of the current century and finally came to a close after many years of bitter struggle.

**H**OWEVER heavy the oppression exerted by successive Han ruling classes over the Yao people, direct Han rule had never penetrated the Yao mountains before the 40s. Notwithstanding their internal conflicts the Yaos had always managed to



present a united front against direct external rule. But by the 40s the reactionary Kuomintang rulers of Guangxi would no longer be thwarted. They adopted what they termed a "policy of enlightenment," aiming to bring direct rule to bear over the minority nationalities in the region.

Han officials were sent into minority districts to suppress any resistance with arms. A garrison command and "Bureau for the Establishment of Order" were set up. The traditional tablet system in the Dayao Mountains was smashed and the region split up into seven areas each under the administration of a different county, a "divide and rule" tactic. The class contradictions among the Yao people themselves were put to use by conferring leadership posts upon Yao landlords and using them to enforce Kuomintang rule. These measures brought out into the open class contradictions long hidden by, and masked as, contradictions among nationalities. Anti-rent struggles by Migrant Yaos broke out and persisted up to the time of liberation.

After the people's republic was founded in 1949 the Kuomintang reactionaries in Guangxi put up a last-ditch struggle, withdrawing into the Dayao Mountains in anticipation of a comeback. During the year 1950 the region suffered heavily under the armed occupation of Kuomintang troops. These committed every possible outrage, breaking into homes, pressganging men, raping women, confiscating food and taking whatever money they could find. To the Yaos it was nothing less than a calamity. Many died, families were broken up and scattered. This lasted until the end of the year, by which time the People's Liberation Army advanced into the mountains. After three months of fighting, with the cooperation of the local Yao inhabitants, they finally mopped up the remnants of the Kuomintang army.

The skies were now clear over the Dayao Mountains. Ended once and for all was that chapter in history I had first witnessed 43 years ago in this region. By the

## THE ACCIDENT

On August 1, 1935 Fei Xiaotong married Wang Tonghui. He had received his M.A. from Qinghua (Tsinghua) University and she had just finished her third year in sociology at Yanjing (Yenching) University. Four days later the newly-weds left for the Dayao Mountains of Guangxi (Kwangsi) to make a survey of the social organization of the Yao people. In spite of extremely difficult conditions in language, communication and daily life, they worked very hard for four months and gained very valuable information.

Then on December 16 an accident occurred. They were traveling on a mountain trail between two villages, fell behind their companions and became lost in the dense forest and rugged hills. Taking the wrong path, they wound in and out among the hills without meeting anyone or coming within sight of any human habitation. Near a grove of bamboo Fei Xiaotong's foot triggered a "dead fall" tiger trap and huge quantities of stone and timber came crashing down upon him. He was badly injured and could not walk. Unhurt, his wife set out to bring help — but never returned.

Fei lay on the cold ground through the night, chilled to the bone, hungry, thirsty and in great pain. The following morning his wife did not return. Fei began crawling slowly along the narrow trail. Finally, late in the afternoon, he was found by a local tribesman. Very worried, he asked about his wife. No one had seen her. Fei was carried to the nearest Yao village and a general alarm was sent out. A search of several days over every mountain trail and wooded hill failed to find her. Seven days later searchers found her body floating in a mountain stream.

The following year Fei Xiaotong edited their notes on the Hualan Yao and published a book entitled *Social Organization of the Hualan Yao People* (June, 1936) under his wife's name as an eternal memorial to her.

time of my current visit the new history of the Yao mountains had already been 27 years in the writing. And so, when I went back there with my recollections and was suddenly confronted by the fresh pages authored by the Yao people, small wonder that I had the sensation of being in an altogether different land.

**F**ORTY-THREE years are by no means a brief interval where individual lifetimes are concerned. From the prime of life I myself had entered old age. Consequently when I broached my intention to

revisit the Dayao Mountains during my trip to Guangxi, not only were my listeners somewhat surprised but I too felt certain qualms. Was my nearing-seventy physique still equal to the rigors of mountain climbing and tough trails?

My fears proved unnecessary. Enormous changes had taken place in the Yao mountains. To begin with, the trek from Nanning, the capital of Guangxi, to the mountain center of Jinxiu — the place I had failed to reach 43 years ago — was this time made in a comfortable "Shanghai" automobile.

In comparison with the foot-slogging and cliff-scaling of earlier times, the six-hour drive over 340 kilometers of highway seemed like something out of another world.

It was evening when I arrived in Jinxiu. After a brief rest, I pushed open the windows and was greeted by the sight of a galaxy of lights sparkling on both sides of the Jinxiu River. I asked myself if I was really in the Dayao Mountains. Just then my host turned on the lights in the room and said, "We can't use all the power our hydroelectric station produces. We need faster development."

I learned that the Central Power Station in Jinxiu, which went into operation more than a year ago, had been fitted with two generators, each with a 1,600-kilowatt capacity. Only one was in use, however, because the county didn't need that much power. In fact, with the rugged terrain, there was no lack of gorges and swift-flowing streams which local brigades could use for power generation. Many already had small generators of their own. Later I visited the Central Power Station and, looking up, saw great pipes plunging almost vertically from the mountaintop in a 680-meter drop. Rarely does one find such ideal power-generat-

Rice paddies cultivated by Yao commune members on high altitude slopes.  
Zhu Yongqing



ing conditions. The region possesses a vast power potential for building a modern economy.

Many times during this visit I hesitated to believe my eyes, not sure whether the things I saw were fact or fantasy. Forty-three years ago, when night fell over the mountains, the only light in the dark hovels came from the flames of small fires. If the need arose, resin-rich chips were ignited. These gave off a pleasant odor but filled the room with so much smoke that I could hardly open my smarting eyes. I used a flashlight and this was always a signal for local urchins to rally around and follow me about. But now every home had electric lighting, every production brigade showed movies and every commune possessed a TV set. A project was even under discussion to publicize the use of electric stoves as a way to save on firewood.

Power potential is by no means nature's only gift to the Dayao Mountains. Countless emerald-green valleys and ridges are a veritable treasure house of timber. On the second day after my arrival I was taken by car to a forestry center 1,400 meters above sea level. Forests stretched as far as I could see. As I stood there, a huge load of logs swept over my head on a cable and came to rest on a pile by the highway. Electricity from a station on the Jinxiu River had been brought to the lumberjacks. The days when it took several days for men to carry a single log out of the mountains on their shoulders were gone.

The Yaos are developing new industries using wood as their raw material. Wrapping paper made from local pulp is marketed outside the mountains and wooden spindles produced here supply spinning mills throughout Guangxi. Unimpressive as these industries are as yet, there is no telling what epics of construction will be written henceforth under the title "Timber plus Electricity." I tried to imagine what these mountains would look like by the year 2000.

(To be continued)

**DO YOU KNOW?**

## **FESTIVAL OF THE POET QU YUAN**

**T**HE fifth day of the fifth month on the Chinese lunar calendar, or *duan wu* (meaning the first of the three fives in a month's calendar) is a festival dedicated to the great poet Qu Yuan (Chu Yuan, 340-278 B. C.), honored for his devotion to his native state. It is also known as "the poet's day" in some parts of China. This year it falls on May 30.

Qu Yuan lived in the State of Chu north of the Changjiang (Yangtze) River in central China during the Warring States period (475-221 B.C.). The State of Chu was in constant danger of being invaded by the State of Qin (Chin), strongest of the seven feudal kingdoms which was trying to swallow up the others. Qu Yuan, one of the Duke of Chu's ministers, was leader of the anti-Qin forces at the Chu court.



A dragon-boat race in the Summer Palace, Beijing.

Guan Ping

Capitulators among the other officials spread slanders about him, which the king believed and sent him into exile. While in exile he learned that Qin had invaded the Chu capital and in despair on the fifth day of the fifth month threw himself into the Milo River in present-day Hunan province. His feeling for his native state has been often recalled by the Chinese people during times when their nationhood was threatened by invasion. He is one of the greatest poets of ancient China. His works include the autobiographical *Li Sao* in which he speaks of his political ideals, *Tian Wen* (Petition to Heaven), *Zhao Hun* (Calling Back the Soul) and *Nine Songs*.

**T**HE people honor the memory of Qu Yuan on this day by eating *Zongzi* and holding dragon-boat races. *Zongzi* are little packets of glutinous rice with jujubes, ham and sweet bean paste added for interest, wrapped in leaves of rushes. According to one version these had their origin in rice placed in tubes of bamboo and thrown into the river as food for Qu Yuan's spirit. Later the rice was wrapped in chinaberry leaves and tied with thread of five colors so that the river dragons wouldn't eat it. It was felt that since Qu Yuan was a wise man, he would be

able to untie the thread and eat the rice. Today's *Zongzi* are not thrown into the river, but boiled and eaten for fun. They are three-cornered in the north, oblong in the south. The ones made in the Guangxi Zhuang (Kwangsi Chuang) Autonomous Region are a third of a meter long and weigh half a kilogram.

Dragon-boat races are still held on the rivers of south China. They are said to symbolize the people's attempts to rescue Qu Yuan, though the custom possibly had a much earlier origin. The wooden boats, big enough to hold 40 people seated in pairs, measure about 30 meters long. The prow is a carved dragon's head and the body, painted with dragon-like designs. Decorated with colored banners, the boats start their race amidst the sound of gongs and drums and rousing singing.

**C**OMING in the lull between spring plowing and summer weeding, the festival is celebrated in a variety of ways. It has overtones of spring purification, and in the south it is the occasion for a good cleaning. Baths are taken in water boiled with Chinese mugwort and calamus, two herbs with a strong smell. Fragrant sachets of aromatic grasses in the shape of calabashes, bats, water chestnuts or birds are placed around the

necks of small children, or colored thread around their necks, wrists and ankles. People once believed these could protect the children from evil.

On this day it is also customary to take a drink of wine containing realgar, rub the wine on children's faces, ears and noses, and sprinkle it on beds and mosquito nets to keep away insects for the summer. By custom people always try to eat some fresh fruit on this day.

**A**MONG the Tibetans *duan wu* is celebrated as the birthday of the god of medicine. People make an excursion to the countryside taking with them wine. At a place where flowers grow, the party stops and everyone sits around tossing flower petals into the wine and then drinking the "hundred-flower wine."

Women of the Korean nationality in China's northeast hold competitions on swings. The Dai people along the southern border beat drums and gongs, set off firecrackers, sing and dance. Among the Miao people it's horse races and archery contests. For the Hani, Miao and Naxi nationalities it is the day for announcing betrothal. And a popular activity among people of all nationalities is to go out collecting medicinal herbs.



Container in the shape of a sitting hen with "iron rust" design.

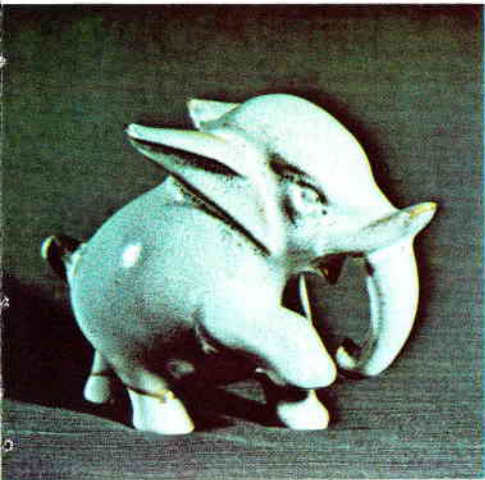
## The Famous Cizhou Porcelain

**C**IZHOU (Tzuchou) ware, a happy combination of bold peasant designs on porcelain, has been well known since the Song dynasty (960-1279) though it was first made much earlier. The name comes from the ancient pottery center Cizhou in today's southern Hebei province, and that name, meaning "pottery prefecture" obviously came from the craft that grew up there. Now this type of ware is made in the north China provinces of Hebei, Henan, Shandong, Shanxi and Shaanxi. Products include bowls, dishes, jars, vases and porcelain headrests.

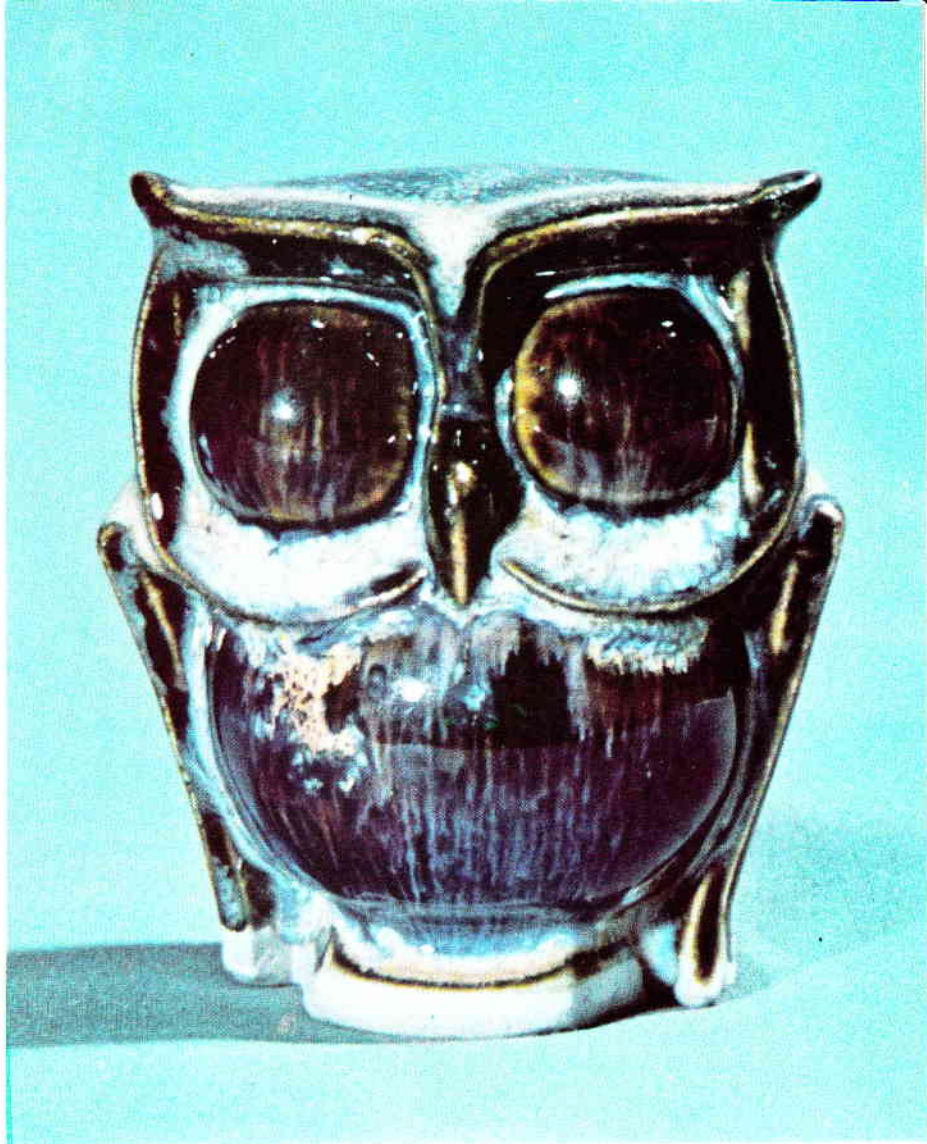
Despite its beauty and ancient origin, for a long time Cizhou was not included in the list of famous porcelains because its designs did not seem "refined" to the feudal ruling class. It was described in articles by scholars and officials in terms such as "extremely simple and coarse" and "suitable for public eating places as it is durable." But in more recent times pieces of Song dynasty Cizhou ware are valued as priceless antiques and the present-day production is extremely popular. Cizhou porcelain was created by the people and it is just these features of simplicity, durability and practicality that have made it loved until today.

After the new China came into being in 1949 efforts were made to revive the then-declining production of this ware. Ancient examples were widely sought and studied. Further developing their fine tradition, the Cizhou potters have created many new colors of glazes, new transmutation mottled tints and new decoration. The products are sold abroad in more than 50 countries and regions.

**C**IZHOU is known for its designs in iron rust color. Pigment containing iron painted on the white slip, or coating, on the pot turns this color after firing. This discovery centuries ago created a new method of decoration and became the chief characteristic of Cizhou ware. The vigorous brush strokes of the design are said to have exerted a permanent influence on the *xieyi* (expression of the spirit) style of Chinese tradi-



Elephant.



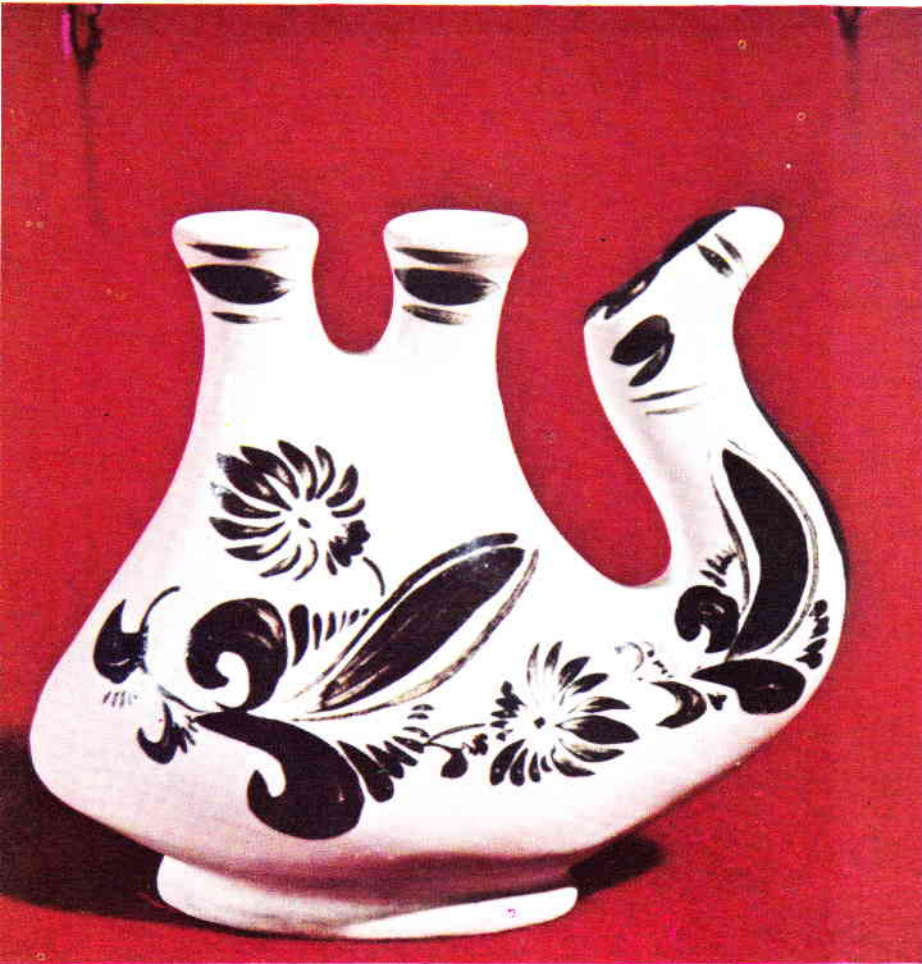
Owl.



Plaque incised with a fish design.

Teapots in the shape of a willow leaf.





Camel-shaped flower vase.



Horse.



Plaque incised with a flower design.



Hen.

tional painting. A typical example of this coloring and style from the Song dynasty is the headrest with the bamboo design (right, bottom).

Another technique associated with Cizhou is to etch out the background so that a design appears slightly raised. Small circles are cut into the background to create the effect of inlaid pearls, as shown in the Song dynasty kidney-shaped headrest at right. The lotus and fish design symbolizes continuous abundance: the character for lotus (*lian*) has the same sound as that for continuous, and that for fish (*yu*) the same as abundance.

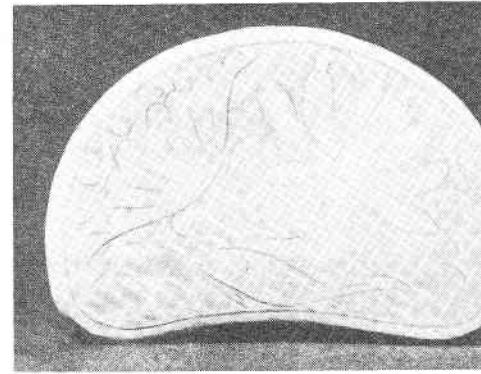
Still another style associated with Cizhou growing out of the above method is the scraped design. The body of a piece is coated with black glaze or white slip and the background is dug away with a bamboo splint so that after firing the raised design stands out in the contrasting color as illustrated by the peony-design plaque on p. 52, a modern work. This method is sometimes used to create a three-dimensional effect.

**T**WO of the new Cizhou pieces, both using the traditional iron rust color, are a camel-shaped vase and a container in the shape of a

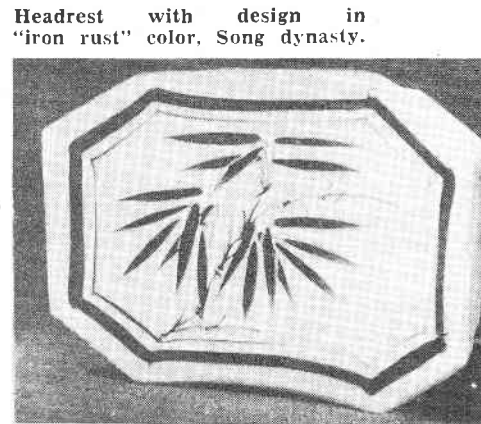
sitting hen. In their imaginatively-designed shapes and combination of usefulness and beauty they are reminiscent of the bronze animal-shape wine containers of the Shang dynasty (16th to 11th centuries B.C.).

Some of the above-mentioned new works were designed by Professor Zheng Ke of the Central Academy of Arts and Crafts, in cooperation with veteran craftsmen, technicians and young pottery painters. Some were designed by the young painters themselves. Seventy-year-old Professor Zheng has spent a lot of time working side by side with the workers in kilns in Pengcheng near Cixian, the present name for Cizhou. He says he regards Pengcheng as his artistic home.

A traditional method used to achieve a fresh artistic effect is a low black-glazed pot with transmutation mottled tints created by Guo Futing, an engineer of the Cizhou area. On top of the unfired glaze of high iron content were added splashes of zinc silicate and then firing was done at above 1,200 degrees Centigrade. The resulting yellow markings against the black background are like fireworks against the night sky. Guo has made many innovations in glazes.



Kidney-shaped headrest with background of "pearls," Song dynasty.



Headrest with design in "iron rust" color, Song dynasty.

Jar with human figure design, Song dynasty.



Raised black glaze design contrasts with background on Song dynasty vase.

# Weather Forecasting

RAO XING

SOME part of China's vast and complex territory suffers disaster from the weather almost every year. This has made meteorology an important study since ancient times. The oracle bones and tortoise shells from over 2,000 years ago, bearing China's first writing, are inscribed with records of sand, wind, snow, rain and hailstorms. During the Spring and Autumn and Warring States periods (770-221 B.C.) the year was divided into 24 solar terms as a guide to farm work. Special officials kept probing the sequence of winds, rain, thunder and lightning and studying the relation between weather and agriculture. Often their conclusions were put into rhymes or songs to make them easier for the people to remember.

In the Western Han dynasty (206 B.C.-A.D. 23) a simple device was used to tell wind velocity from the pitch of a whistle. The weather-vane to show wind direction dates from the Eastern Han dynasty (A.D. 25-220). Accurate measurement of rainfall and snow was regarded as vital to agriculture in the Southern Song dynasty (1127-1279). In 1425 the government distributed standard rainfall gauges 49.5 centimeters in height and 23.1 cm. in diameter throughout the country. During the reigns of Qing dynasty emperors Kangxi and Qianlong (between 1662 and 1795) these gauges were made of bronze.

Even in ancient times a number of scholars were able to explain natural phenomena scientifically. Wang Chong in the Eastern Han dynasty systematically elucidated how thunder and lightning differed in different seasons of the year. Shen Kuo in the Song dynasty (960-1279) gave a scientific expla-

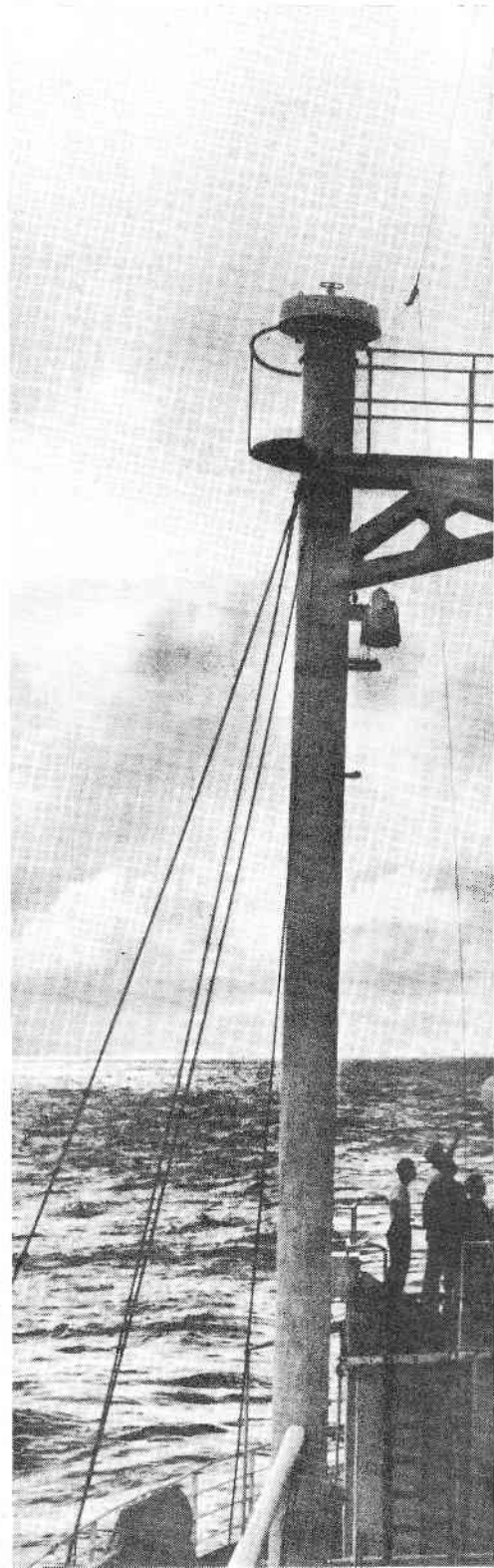
nation of how the rainbow was formed. In the 14th century Lou Yuanli collected peasant proverbs on weather and compiled them into a book called *Guides for Farmers*, which has in the main proven scientifically correct.

## Widespread Network

Though Chinese meteorological science was quite developed in the early centuries, in modern times it lagged behind that in western countries. At liberation in 1949 China had only 72 weather stations, most of them with outdated equipment and incomplete records. Since then a weather network has been built up which embraces 2,600 government-run stations, 18,000 commune observation posts and many weather-watching teams. There are also special weather stations serving the military, aviation, navigation, forestry, fishing, state farms, salt fields and mining areas. A total of 42,000 professional personnel have been trained as well as tens of thousands of peasant amateurs who watch the sky over China's mountains, islands, deserts and grasslands. Previously only government stations issued forecasts, but now these smaller observation posts issue limited local forecasts.

An example is what happened in Guiping county in the Guangxi Zhuang (Kwangsi Chuang) Autonomous Region. There are weather observation posts in all of its 23 communes, and weather forecasting groups and sky watchers in the 200 production brigades under them. Analyzing the weather situation in the winter of 1978 a county-wide meeting predicted a warm spring without cold waves, followed by cold earlier than usual in autumn. Following their advice, the farmers sowed and transplanted their rice earlier than usual so.

**RAO XING** is a leading member of the Central Meteorological Bureau.





Rockets fired to disperse hailstorms.

Xinhua

An area where sand is being stabilized by planting trees.

Xinhua

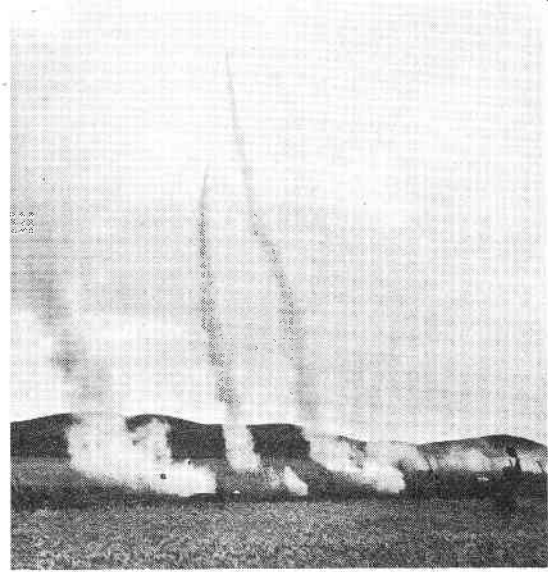
A staff member from the meteorological bureau in Guidong county, Hunan, and two commune weather watchers.

Guidong Bureau

Weathermen visit a winter lambing paddock in the Nei Monggol (Inner Mongolia) Autonomous Region.

Xinhua

Balloon-borne robot weather observers, as released above from a ship, radioed in valuable information during China's first oceanographic survey. Xinhua



that the second crop of rice was able to ripen fully before the cold set in.

The county weather stations issue long, medium and short-range forecasts, consult and exchange information when they anticipate weather that will affect agriculture. They constantly seek to improve the accuracy of their forecasts through careful investigation of actual conditions and listening to the peasants' opinions.

### Better Service

Crops in Dunhua county in China's northeasterly Jilin (Kirin) province frequently suffer because of cold or sudden drops in temperature. Making this problem their main subject for research the county weather station staff worked out the pattern in which high and low-temperature years occur. They found that 1973 was expected to be a warm year with little rain, and suggested to the county authorities that more middle and late season crops be planted to fully utilize the warm weather. As a result the county's grain production was 20 percent more than that for 1970, its record year.

Work in many agro-meteorological organizations, which had been disrupted as a result of Lin Biao and gang of four policies such as sending the staff off to do farm work, has been taken up again. In addition, almost 300 stations have set up sections which give special guidance to agriculture. They have drawn up maps based on meteorological data showing which crops are suitable for growing in which areas.

Mountainous Guidong county in Hunan province has a complex terrain, and the climate changes markedly with the altitude. Rice is grown on terraced fields ranging as high as 1,490 meters above sea level. The county weather bureau and agricultural science institute maintains some 20 observation points at different heights. On the

basis of their findings the county leaders have promoted planting of several new strains of hybrid middle and late season rice suited to the different altitudes. As a result the county's yield averaged 6 tons per hectare.

One of these agricultural sections in Xianghuang Banner (county) in Nei Monggol (Inner Mongolia) recommended that lambing, which is done in enclosed shelters, take place in winter rather than spring, thus giving the young sheep a longer period of warm weather to enable them to grow strong enough to resist illness before the next winter. This is one of the big factors in raising this area's production of sheep.

These units not only predict but try to do something about the weather. Good results in artificial rainmaking and prevention of hailstorms have been achieved in 26 provinces, municipalities and autonomous regions. Droughts were relieved in Hunan and Shandong provinces by artificial rainmaking. Of the 800 counties most prone to damage by hailstorms successful large-scale experiments have been conducted in 500. In the summer of 1978 eight districts in Sichuan province, including Mianyang, Chengdu and Xichang, 109 impending hailstorms were converted into rain.

Large-scale experiments to prevent frost have been successful in north, northwest and northeast China. Such efforts in Heilongjiang province in the northeast saved crops on 670,000 hectares of land in 1977.

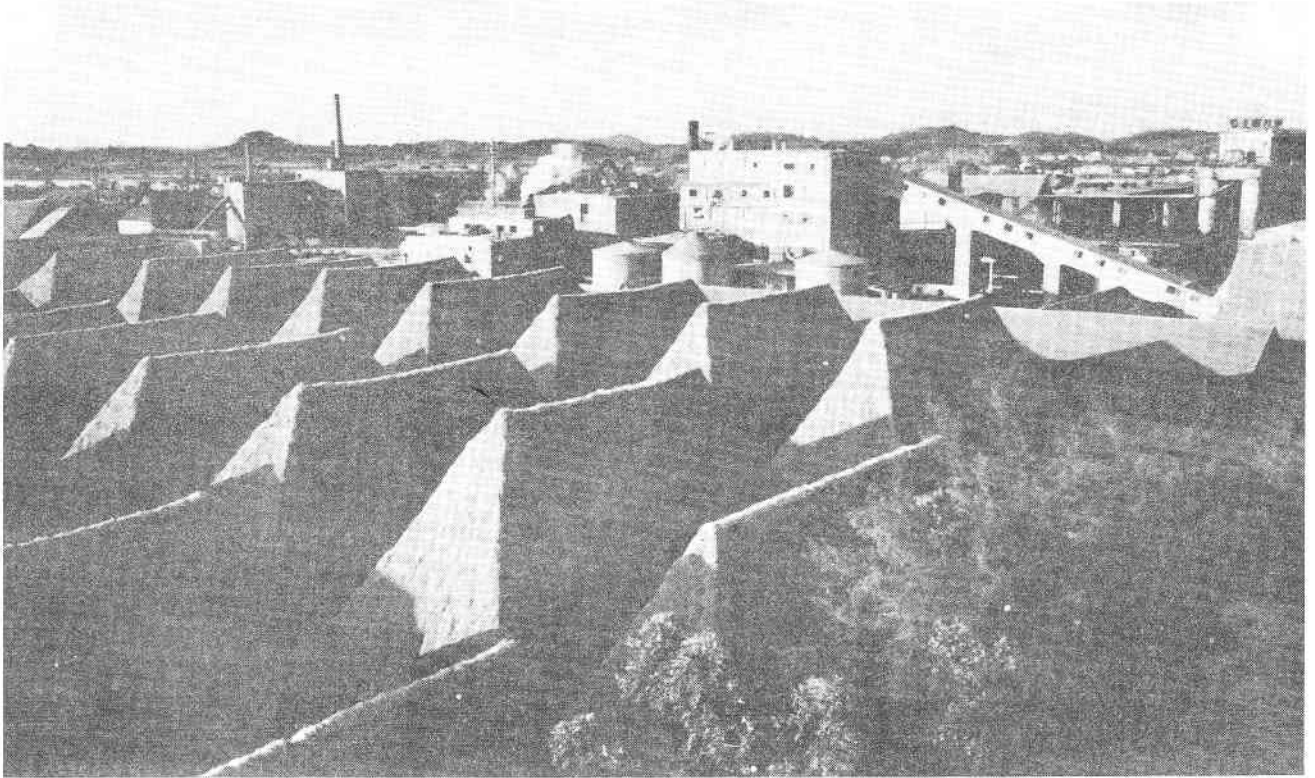
### Modern Equipment

Weather research is being carried on at many levels: by the Chinese Academy of Sciences, the Central Meteorological Bureau and by provincial weather bureaus and to their results are added the findings of other professionals and amateurs. A great deal has been done in exploring matters such as cold

waves, typhoons and the atmospheric circulation over eastern Asia. Seventy-two items of research were commended by the National Science Conference last year.

The Qinghai-Xizang (Chinghai-Tibet) plateau — a quarter of China's territory which stands an average of 4,000 meters above sea level — exerts a great influence on weather not only over a large portion of China but over the entire Asian continent and the northern hemisphere as well. Summer droughts, winds and hailstorms in southwest, northwest and north China and the valley of the Changjiang (Yangtze) River are closely linked with the weather system of this plateau. Surveys have been conducted over its glaciers and snow-capped mountains and more than 130 papers written on the influence of the plateau's topography on China's climate. These studies found that monsoons from the Bay of Bengal, which had been thought unable to cross the Himalaya Mountains, actually do influence the climate on the plateau, particularly that of Yunnan province and Xizang (Tibet). Using models the scientists have been able to learn more about this by simulating the effect of the plateau climate on general atmospheric circulation.

Progress has been made in modernizing meteorological equipment. Today China is able to manufacture radar equipment for meteorological use as well as instruments for ground and aerological observation. A radar typhoon warning system has been built along the coast. Most weather stations utilize information acquired through satellite and weather map telephotography. Laser cloud detectors, devices of extra-high resolving power for taking the cloud atlas from satellites and new models of weather radar have raised the ability to detect typhoons and hailstorms.



The Jiangmen Sugar Chemical Plant.

Xinhua

# Jiangmen Sugar Chemical Plant

**A** SUGAR FACTORY that makes cement, bricks, chemicals, medicines, fiberboard, and even iron and steel? This is the Jiangmen Sugar Chemical Plant on the Pengjiang River in the Zhujiang (Pearl) River delta of southern Guangdong (Kwangtung) province. Over 40 percent of its products come from its own waste materials alone.

In the autumn, if you stand on the plant's docks at the riverside you can see hundreds of boats coming from the communes loaded with sugarcane. After cranes move it to a conveyor belt that carries it to the grinding machines, the boats do not go away empty. They are loaded with the plant's finished products — such as sugar,

paper, fiberboard, yeast, alcohol, cement, bricks and medicines.

The plan was originally to build two plants to make sugar and pulp. But in 1958 when Premier Zhou Enlai came on an inspection visit, he found no one paying attention to the great amount of waste being discharged every day. Combine the two plants into one, he suggested, and turn the waste into useful products. He urged the workers to be bold enough to surpass their teachers, the plant's capacity and what was written in books. In the following years Premier Zhou met workers and plant representatives many times.

The plant grew. Instead of its original five products, it now turns out 24, including light industrial

items, chemicals, pharmaceuticals, iron and steel, and building materials. The efficient use of all of the sugarcane — and of waste products — has also reduced pollution. It also made contributions to the manufacture of ribonucleic acid (RNA) and its derivatives in China.

## Using Waste

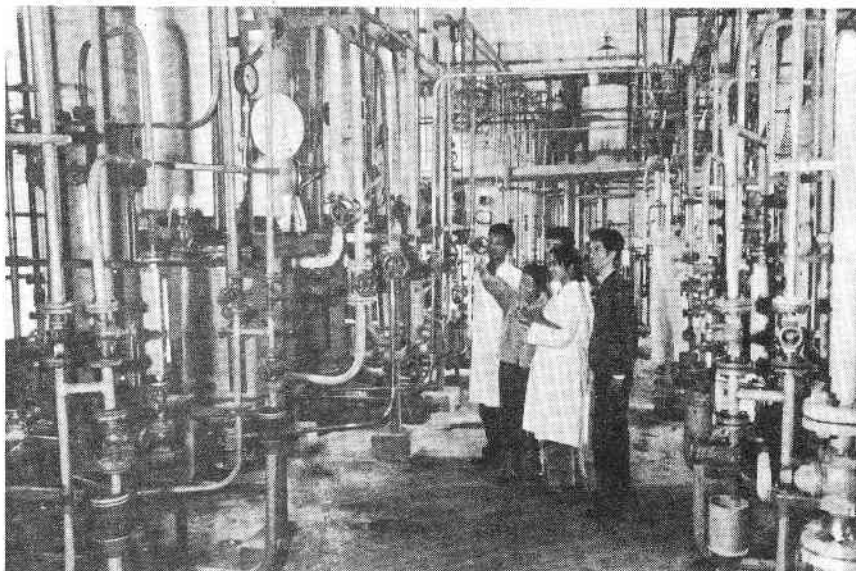
The plant has 3,600 workers. In making sugar, every day it discharges 1,457 tons of waste solids, 12,900 tons of liquids and 12 tons of gases, all of which is now recycled or used as additional raw material.

In the grinding shop, after 6 machines with huge rollers crush the sugarcane, the juice flows off to a cleaning department. Tall



The wharf of the Jiangmen Sugar Chemical Plant.

*Cai Zhongzhi*



The nucleotide shop.

*Nong Youying*

vacuum cauldrons boil the liquid sugar. High-speed centrifuges throw off remaining impurities.

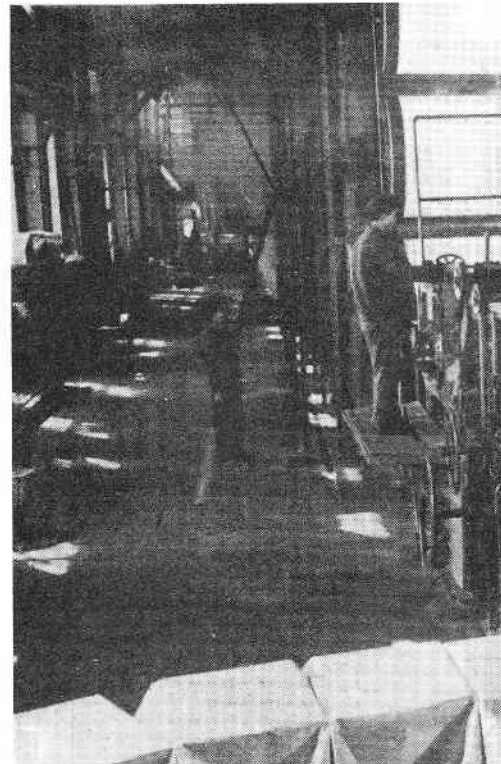
Another shop makes 2 tons of furfural per day from the cane husks. In the past these flew in the wind or were piled as waste. A fiberboard shop now turns out 10 tons a day by mixing husks, leaves, sawdust and other residue. It produces 1,760,000 yuan of products per year.

A small paper mill utilizes the waste from pulp-making, grinding it and adding a colloid to produce 1,000 tons of brown paper per year. Five different products are now made from bagasse and other residue. The 1,000 tons of waste water discharged every day is

used to make a binding agent and a fertilizer.

There is an iron smelting shop with a 3-meter blast furnace that uses the pyrite cinders which are left after the sulphur is removed. (The sulphur goes into paper making.) These used to be dumped into the sea. Since 1972 the shop has produced 3,000 tons of iron, some sold, some turned into carbon and alloy steels for the plant's own use.

The sugar plant's five boiler fires leave 300 tons of cinders every day. At first people also wanted to dump them into the sea. Most of the workers objected to the waste, the danger to navigation and pollution of the water. They



Fiberboard shop.

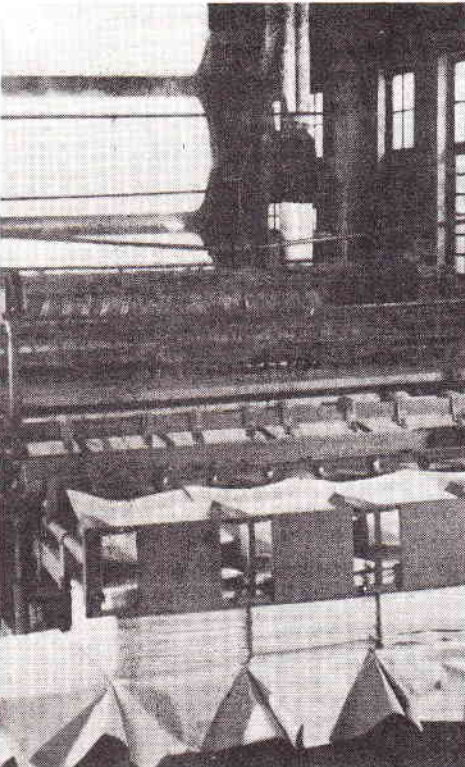
proposed to make bricks with them. Today the cinders are made into 30,000 bricks a day.

Sugarcane juice is purified with lime. The sedimentation contains calcium carbonate which the workers use in producing cement. They also make 4,500 tons of fertilizer a year by mixing this sedimentation with the waste liquid from pulp making, calcium superphosphate and ashes.

The plant used to spend over 100,000 yuan a year to dump its pyrite cinders, sedimentation and coal cinders.

### Machines of Many Uses

Following the late Premier's advice, the workers have also constantly improved the equipment, operations and processes. As a result the amount of sugarcane ground has gone up from 3,000 to 4,300 tons per day, 40 percent more than designed capacity. Improvements made in grinding machines by Du Guangchao, second chief mechanical engineer, have increased utilization of the sugarcane



Xinhua

stalks from 35 to 70 percent, making it possible to get more juice but with less damage to the cane's fiber.

The boiler room also has been improved. Its four boilers used to put out 32 tons of steam each per hour. Now one of them produces 45 tons per hour, and the other three 40 tons.

Sugar making is seasonal but the plant's machines never stop working. The workers have altered the equipment to enable it to serve many purposes. The paper pulp-making machines, for example, can also produce rayon pulp. When no sugarcane is being ground, the lime kiln makes light calcium carbonate and the vacuum cauldrons turn out micro-cellulose and "702" pesticide. Converting machines to multi-purpose use has greatly increased the plant's overall production efficiency.

The workers have also become versatile technically. Huang Xing, a machine repairman, has learned

how to make cement and cinder bricks. The production of iron and carbon steel from pyrite cinders was introduced by Xu Peifu, another repairman.

The fermenting shop used to turn out only alcohol, yeast and dry ice. In 1973 technicians Liu Gangchang and Liang Yonggen succeeded in making cytidine triphosphate and glutamoyl. Now the shop also produces ribonucleic acid (RNA) and nucleotide—products urgently needed by the country. Chen Shanjun and Liang Yonggen, both technicians, went to the Guangxi Zhuang (Kwangsi Chuang) Autonomous Region and Hainan Island to collect 1,000 samples of fungi for study and finally cultivated "Ganhua No. 1" which works very well in making high-quality alcohol.

The Jiangmen Sugar Chemical Plant is continuing to explore the utilization of its waste and the more efficient multi-purpose use of its machinery.

## ANCIENT FABLES

### Good Reason for Laughing

ONE day a blind man was sitting with some people. Suddenly they laughed and so he laughed too.

"We saw something funny and laughed," someone told him, "but why did you laugh?"

"You are my friends," the blind man said. "You must have laugh-

ed for a good reason, so I joined you."

### A Tall Hat

TO flatter somebody is called putting tall hat on his head.

Once a petty official working in the capital was re-assigned to a locality. Before leaving he went to his former teacher, a big official, to say goodbye. The big official told him, "When working in a locality you must be careful in everything you do and never offend other officials."



"Don't worry, teacher. I have prepared 100 tall hats and will make everyone happy," the petty official replied.

His teacher became angry. "We are gentlemen. How can you do such things?"

"Because most people—except you, of course—like flattery."

The big official smiled and nodded. "Well, yes, what you say is right."

The petty official went back and told some of his friends, "Well, now I have 99 tall hats, for I have given my first one away."



Drawings by Li Binsheng

# The Oriental Song and Dance Ensemble



Practicing the movements of a dance from India.

TAN AIQING

WHEN China's Oriental Song and Dance Ensemble performed in Bangkok for the athletes at the Eighth Asian Games last year its graceful dances and songs from many parts of the world brought thunderous applause.

The ensemble was organized in 1962 at the suggestion of Premier Zhou Enlai, who wanted it to learn Asian, African and Latin American songs and dances and introduce them to the Chinese people. In 1966, partly because the premier had backed the ensemble, the gang of four's cultural dictatorship forced it off the stage. After the gang's fall, the troupe appeared again in September 1977, its return greeted with tremendous enthusiasm.

The group's repertoire includes dances and songs from more than two dozen countries on the three continents, ranging from Japan and the Philippines in the Far East through Asia and Africa to Argentina in Latin America. The items are learned on trips abroad and from cultural troupes visiting China — a friendly exchange that is spreading the songs and dances of many peoples.

A recent performance in Beijing presented some numbers just learned. These included the Malaysian Umbrella Dance, the Japanese Bamboo Hat Dance and the famous Mexican *Jarabe Tapatio*, or "hat

dance" — typical of that country's lively, rhythmic folk dances.

A group of African dances were particularly fascinating. Women in white gauze skirts swaying their waists, shoulders and heads to delightful music seemed like white cranes playing in the water — the Crane Dance from Burundi. Men stalking game in the forest and celebrating their success pictured the hunt — the Tanzanian *Vkala* Hunting Dance.

THE new items were only learned last year. Three groups from the ensemble went to Japan, southeast Asia and Africa. Wang Yongsheng, a quiet Chinese girl who specializes in African dances, was in the group that spent three months in Rwanda, Tanzania, Burundi, Uganda and Zaire. "The African people are wonderful singers and dancers," she said, "and very hospitable. We went to Rwanda first. Our hosts said that no one from any other country had ever come to Rwanda to learn their dances."

The Rwandan hosts arranged for their Chinese friends to stay in a youth training center near Rwanda's cultural center so they could learn the best of the country's dances and folk music.

In Tanzania, the Chinese artists learned the *Vkala* Hunting Dance from a dancing teacher with the Tanzanian National Service Orchestra. Tanzanian dances, very expressive of everyday life situa-

tions, have a strong rhythm. Movement is mainly from the waist, hips and feet. The woman's warm patience in teaching her Chinese friends deeply impressed them.

When the group arrived in Zaire, the chairman of Zaire's Dance Association was about to leave for a tour abroad with the *Sanbolai* Troupe. Nevertheless, he promptly arranged three performances for the Chinese dancers in his own courtyard. The day before the Zaire troupe left, its members spent long hours teaching the Chinese a fishermen's dance from Upper Zaire.

The Chinese dancers wanted very much to meet Zaire's National Song and Dance Ensemble but it was then touring Morocco. The Minister of Culture arranged a special plane to bring them back as soon as they had finished their last performance. The ensemble put on a special show for the Chinese group after they arrived.

Wang Yongsheng and her colleagues learned 14 dances and collected many songs in their three months in Africa. Some of them also learned to play African drums.

ANOTHER group from the Chinese ensemble spent two months in Thailand, the Philippines and Malaysia learning songs and dances. Some of these they performed in Thailand, Singapore and Hongkong.

The ensemble also learns songs and dances from troupes visiting

TAN AIQING is a staff reporter for *China Reconstructs*.

The Crane Dance (Burundi).



The Jar Dance (Sri Lanka).



In Praise of the Five Principles of Peaceful Coexistence, a Nepalese solo dance.

*Photos by Zhang Jingde*



The Melody of Yagibushi, a Japanese dance.



A dance from the Egyptian countryside.







Festival on the Plateau, an Argentine dance



The Hat Dance (The Philippines). Photos by Zhang Shuicheng

Foot-Bell Dance (Bangladesh).

Liu Che



China. The Mexican *Jarabe Tapatío*, for example, was learned this way. Xing Dehui, the ensemble's choreographer, and Wang Qiang, a woman dancing teacher, learned this dance by following the Veracruz University Folk Dance Ensemble of Mexico for nearly a month while they were touring China. Their teacher was a Mexican Indian woman with 15 years on the stage.

The *tapatio* has lightning foot movements and a fast rhythm very different from the Chinese dances which are usually characterized by movements above the waist. It was not easy for the Chinese artists to learn. Xing Dehui and Wang Qiang seized every chance to practice. Even while the Mexican ensemble was on stage performing, they would imitate the movements backstage.

Last January 26 the Mexican ensemble gave their final performance in Guangzhou (Canton). Xing and Wang joined them in one of

the dances. After the performance the Mexican dancers surrounded them, embracing and shaking hands with them. "This is one of the best evenings we've had in China," one of them said.

**C**UI SHUMIN, 38, has had a long stage experience. She is now rehearsing classical dances from India. These demand very expressive movements of the eyes, fingers and feet. She said, "We were able to learn the basic movements of the two main schools of Indian dances in one month only because of the hard work of our Indian teachers."

Cui Shumin and two other dancers learned the Indian dances last November while the Indian Song and Dance Ensemble was in China. Their teachers were Mrs. Mrinalini Sarabhai, leader of the Indian ensemble, and Mrs. Kumudini Lakhia, President of the Kadanb Dance School.

"I have taught over 100 Indian students," Mrs. Kumudini Lakhia said. "I'll teach you three Chinese students just as I have my own." She first explained the history and characteristics of the dances of India, the use of sign language in the daily life of the people and its importance in Indian dances. Then came basic movements. Under her warm guidance, the Chinese students made rapid progress. A month later, when the Indian ensemble left to return to India, Cui Shumin and the other two performed the dances they had learned at a farewell party. Mrs. Kumudini Lakhia was pleased with their work.

The Oriental Song and Dance Ensemble has built a real bridge of friendship between the peoples of China and other countries. With the folk songs and dances of Asia, Africa and Latin America as a vast potential repertoire, the ensemble hopes to help enrich China's own folk songs and dances.

A Colombian song.



The Vkala Hunting Dance from Tanzania.

Photos by Zhang Shuicheng



# Advanced Oil Field Research

JING WEN



Extraction workers and technicians analyze underground conditions of their respective wells.



Guo Fumin who helped design the main collection station is now chief machinist.

**R**ECENTLY a technological forum of leaders, workers and technical personnel was held at the Daqing (Taching) oil field. A member from its Scientific Research and Design Institute reported their experiments on getting stable and high yields from the old wells. He spent two days describing each of 100 experimental wells, detailing each well — its early output records, present conditions, distribution of oil-

**JING WEN** is a staff reporter for *China Reconstructs*.

bearing strata, different characteristics, those that had produced oil and those that still had a potential. His clear and systematic account was a model report.

Daqing, located in northeast China, has become one of the biggest oil fields in the world. Although discovered only 18 years ago, its output has greatly spurred China's economic development. Daqing's oil production has increased at an annual rate of 28 percent.

New extracting areas extend north and south from the first



Deputy chief engineer Wang Demin (right) checking an installation for water injection at different oil-bearing levels.

*Zheng Changtu*



This control room in the main collection station tracks all oil flowing out of Daqing to other places.

Photos by Xinhua

wells. In the new areas modern technology is used in drilling, extraction, collection, and oil and gas treatment. In the old areas experimentation is constantly going on to make the most efficient use of the oil-bearing layers, change to new methods and tap untouched potential. This has raised the output of many old wells. Petrochemical facilities have been built. The field's research center — the Scientific Research and Design Institute and 23 other institutes with over 6,000 people — work in laboratories and in the field studying basic theory as well as drilling, extraction and petrochemical technologies.

### New Trails

The exhibition room of the institute presents Daqing's history from the beginning with many charts, models and actual objects. Daqing lies in the center of the Songliao Basin which was a landlocked lake in ancient times. Geologically it belongs to "continental facies." Before the 50s foreign geologists had concluded that China had little oil, basing

themselves on the theory that only marine facies have oil. But the late geologist Li Siguang rejected this conclusion. After a careful analysis of China's geological structure he pointed out that marine conditions had actually existed in many areas at the time of formation, including the Songliao Basin. Thus survey was begun at Daqing. Four years of test drilling outlined the initial extent of the field. Another year and three months proved the extent and quantity of the oil. The "continental structure" was rich in it.

The problem was now how to best protect and use the vast field efficiently. Tapped oil is forced out by underground pressure. As the oil is removed this pressure falls. At the point when the oil is no longer flowing to the surface, the field is considered "exhausted." In the 40s other countries began to inject water to make up for lost pressure. But engineers were afraid the water would invade the oil-bearing strata and reduce output. Thus it was injected only toward the end of production. Results were limited.

Studying the experience of dozens of foreign oil fields and conducting experiments of their own, Daqing's engineers began injecting water as soon as extraction began. This maintained a balance between extraction and underground pressure. As a result they have maintained and even raised productivity of the old wells. Now after more than a decade of extraction, field pressure is still near the original point with the exception of a few wells on the edges of the field.

Today Daqing's researchers are summarizing the basic laws governing petroleum formation, accumulation and migration in continental sedimentary basins, investigating the creation of sedimentary layers from delta lakes, and probing theories on early water injection and reinforced production.

### The People in Research

Wang Demin is a deputy chief engineer for extraction in the Daqing oil field. A graduate of the Beijing (Peking) Petroleum Institute, he came to the field at an early period.

His first job was to test underground pressure. His group found pressure unstable in the oil-bearing layers. To solve this problem they had to check the pressure of each well regularly and draw a map linking up all the points of the same pressure. Their instruments were not accurate. Moreover, the method of interpreting the data they had been following, one developed abroad, did not fit conditions at the Daqing oil field. Mistakes were quite often made. They had to improve their instruments and find a new way of interpreting the data.

Wang Demin worked constantly out at the wells. He saw how hard the workers tried to obtain correct data from each well. Time and again they readjusted their instruments with great care. In winter the workers covered the openings of the wells with their own cotton-padded coats to prevent them from freezing. It was common enough to see them warming equipment with their bodies. Wang began to see each figure in his notebook as the result of the workers' selfless hard work. If he couldn't find a correct way to interpret the data, all their efforts would be wasted.

During the day he worked at the wells. In the evening he studied his data and other methods of interpretation used abroad. He analyzed and compared his figures with those in the literature. At last he worked out a new formula suitable for Daqing. Simple and accurate, it helped get a complete and correct picture of the pressure at different oil-bearing layers. Named the "Songliao method," it is now used throughout the field.

Another researcher is Wang Qimin, a deputy chief geologist from the Daqing Scientific Research and Design Institute. His group worked at an experimental station in the old extracting area trying to achieve stable and high yields by a relay method. In 1974 he led a "three-in-one" group to study how to get full use of the main oil-bearing layers. He spent half of his time with the workers learning and analyzing their ex-

perience and studying theoretical problems. After examining pressure in individual layers of 100 wells, the group injected more water into those with less pressure and treated each well according to its own characteristics. This greatly raised output. Today they try to replace old oil-bearing strata with new ones, something like runners replacing each other in a relay race. The method has raised the daily output of some wells from 9 to over 50 tons, and for all old wells to an average of 40 tons. This has helped the extraction area to maintain its extracting speed at the high level of 2 percent.

Fan Ziqiang is a worker who has become an engineer. Each drilling team in the Daqing field has its own worker-technicians. Fan came to the field in 1972, studied hard to obtain technical knowledge and now knows oilfield geology, extraction technology and fluid dynamics as well as the underground conditions of each well run by his team. One day the output of a well suddenly dropped. He spent three days at the well and finally found the cause. The procedure he proposed raised output to over 40 tons a day.

Guo Fumin is the chief machinist at the Daqing Scientific Research and Design Institute. In the main collection station of the oil field there are high precision instruments registering crude oil volume, flow rate and cumulative volume. They also provide oil density, percentage of water and six other figures, and send them to a control room where the data is computer processed. This equipment was made by a "three-in-one" technical innovation group headed by Guo.

### Science on a Mass Scale

A mass movement for scientific research, known as "science by the people," has been a key feature in Daqing's development. Besides the "three-in-one" groups and, when necessary, mass campaigns to solve some crucial technical problems, there are many kinds of discussion meetings. So far, six such campaigns for scientific experiments

have been carried out. For instance, in the western part of the central field, an area of 9 square kilometers with 80 wells, 500 technicians and engineers were concentrated to find out how to speed up extraction. These people came from extracting, underground work, drilling departments, the Scientific Research and Design Institute, the College of Petroleum Technology, the Extracting Technology Research Institute and the geophysical stations. The campaign got good results in a very short time.

Technical problems concerning the whole oil field are discussed at meetings ranging from dozens to as many as 1,000 engineers, geologists, professors, technicians, leaders from the Petroleum Ministry, the oil field, wells, work teams and skilled workers. This pooling of opinions solves many problems. Main objectives are set, everyone understands the measures to be taken, and everyone's initiative and enthusiasm are brought into play.

Daqing's research goes on at four levels. The highest is the well-equipped Scientific Research and Design Institute at the headquarters. The second consists of technological research institutes and special groups for solving crucial problems. At the third level are the "three-in-one" groups in the work teams. The fourth are the workers' sparetime innovation teams. This big network with division of labor on one hand and coordination of efforts on the other embraces all the forces in the oil field.

While petro-geological theory and extracting technology has been built up as a result of the efforts of Daqing's scientists and workers, there are still weak spots in technological development so far as the whole oil field is concerned. For example, the installations are not very modern and the level of automation and mechanization is not yet high. Today as the country is striving for modernization, Daqing is stepping up its own efforts in this direction in order to catch up with world advanced levels.

# STAMPS OF NEW CHINA

## Arched Bridges in China

A set of five special stamps on highway arched bridges was issued on November 1, 1978 by the Chinese Ministry of Posts and Telecommunications.

Stamp 1, Bridge No. 3 in western Sichuan (Szechuan) province. Turquoise-blue, silver, red and gray-blue.

Stamp 2, the Xinhong (New Rainbow) Bridge in Wuxi, Jiangsu (Kiangsu) province. Emerald, gray-blue, silver and apple-green.

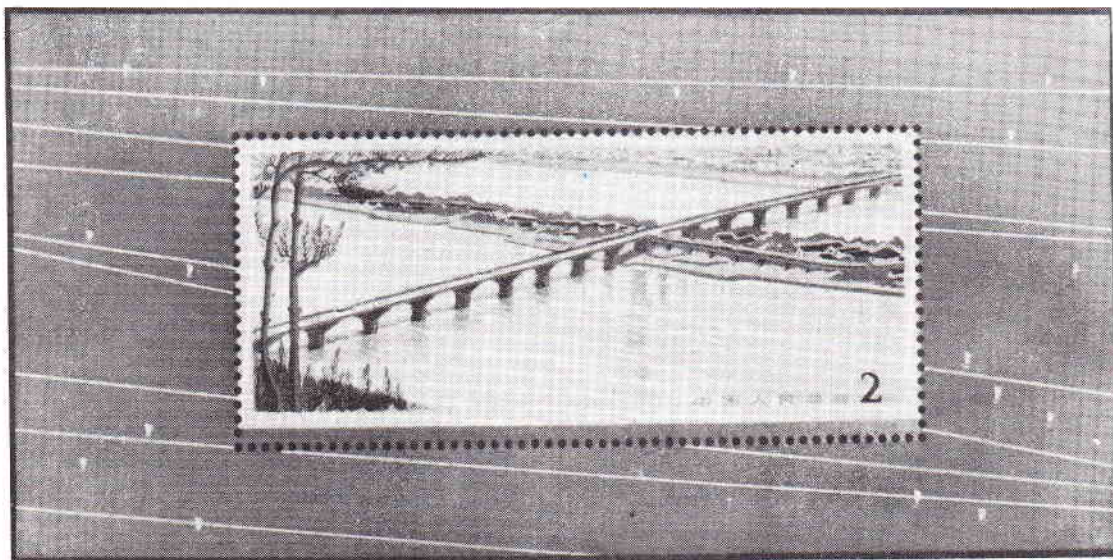
Stamp 3, Jiuxikou River Bridge in Fengdu, Sichuan province. Magenta, lilac, dark blue, silver and maroon.

Stamp 4, Bridge No. 6 in western Sichuan province. Turquoise, green, maroon, silver and chestnut.

Stamp 5, Shangye Bridge in Sanmen, Zhejiang (Chekiang) province. Orange, yellow-orange, silver and maroon.

Stamps 1 to 4 are of 8 fen denomination and stamp 5 is of 60 fen. All measure 30×40 mm. *Perf.* 11. Color photogravured. Serial numbers: T. 31 (5-1 to 5-5).

At the same time the ministry issued a special stamp in a miniature sheet depicting the Xiangjiang River Bridge in Changsha, Hunan province. Apple-green, gold, deep blue-green and yellow-green. Two-yuan denomination. Measures 146×70 mm. *Perf.* 11. Color photogravured. Serial number: T. 31.





Huang Xiping, Chou Chenyan and Li Xiaoping, outstanding players, return to the Julu Road Primary School after a national contest.

## SPORTS

# Grade School Trains Table Tennis Champions

Teaching each other.

Photos by Yang Changrong and Li Huchen



Ke Yuanxin coaching.

**A**N ordinary primary school on Shanghai's Julu Road has produced so many table tennis champions in the last two decades that several years ago it was commended as an advanced sports unit and even called "the cradle of table tennis players."

Outstanding players who have come from the Julu Road Primary School No. 1 include Huang Xiping, a woman whose forehand and backhand loop has attracted attention in sports circles abroad,



and Lu Yuansheng, a newcomer who floored such noted players as Japan's Mitsuru and Yugoslavia's Surbek with his high-spin chop and stubborn counterattacks in the 33rd World Table Tennis Championships. Today China's best team — the national team — and the "August 1st" team of the PLA, some provincial and city teams have players from the school. At the National Table Tennis Contests of 1977 and 1978 its graduates won titles in the women's team event, doubles and singles.

Of the school's nearly one thousand pupils more than 90 percent play table tennis. Most of them didn't know a thing about the game when they entered the school.

Table tennis got its great impetus in the school in 1959 when China's Rong Guotuan won the men's singles at the 25th World Table Tennis Championships. Ke Yuanxin, a sports teacher at the primary school at the time, thought this a good opportunity to popularize the game and that it would be a good sport for the school because the grounds were small. The school meeting room became a table tennis room. With playing space limited, the pupils went to a neighborhood market after it closed in the afternoon and used the wide board counters for tables. At home they used their board beds.

"You can't train a good player on tables like these," some people said. But in a primary school table tennis competition in Shanghai three years later the Julu Road Primary School No. 1 walked off with firsts in the boys' and girls' team events, and in a national meet for juniors that year took the primary school team title.

Potentially good players in the school were spotted early. Champion Lu Yuansheng, for example, played a lot when he was there. One day he was playing a game with a rather arrogant student in a higher grade who dropped one just over the net. Lu jumped up on the table and smashed. This alert and stubborn spirit impressed Teacher Ke. He began giving Lu special training.

Zhang Dilan, a woman hand-shake grip player and a former member of China's national table tennis team, is now a coach for the Anhui province table tennis team. When she was only five she used to stand in the yard of the Julu Road School and watch the pupils play. Huang Jiayu, one of the teachers, noticed her imitating the players' movements. When she entered the school she was placed in Huang's class and he sent her to Ke.

A table tennis group was formed and Ke gave its members a systematic and hard training. Of medium height, Ke is not good at talking but is respected by the pupils and their parents. For 18 years he has been turning out good players.

He has always arrived at school at 6 a.m. and worked until 8 p.m. when he had finished coaching the last team member, playing with them all himself. Some of them were not much higher than the table when they started. Some could hardly get their fingers around the bat firmly enough. All this meant a lot of painstaking work for Ke but he never tired of it. He studied books on table tennis and constantly tried out new ideas. His spirit moved the people working with him. He was cited as one of Shanghai's outstanding grade-school teachers last year.

## Chinese Cookery



### 'Squirrel' Fish

(Song Shu Yu)

This is a dish from Jiangsu (Kiangsu) province.

- 2 lb. croaker (or any similar fish with few bones)
- 3 tablespoons corn starch mixed in 3 tablespoons water
- 2½ tablespoons rice wine (or sherry)
- salt
- sauce:
  - 3 tablespoons soy sauce
  - 4 tablespoons vinegar
  - 6 tablespoons sugar
  - ¼ cup (50 c.c.) cold water
  - remainder of starch mixture and wine
  - 3 teaspoons minced scallion
  - 1 teaspoon minced ginger
  - 1 teaspoon minced garlic
  - 1 lb. oil for deep frying

Clean, scale and wash fish. Cut head off and reserve.

Split fish down center of back but keep the two pieces linked at the tail. Remove backbone and ribs. Score both inside surfaces two-thirds of the way through as shown. Rub salt on inside surfaces and pour on 1 tablespoon wine. Cover inside and outside surfaces with 3 tablespoons of the starch solution. Let dry awhile.

Slash fish head through chin and flatten with the flat of a cleaver. Heat oil till it bubbles and fry head two minutes. Remove to platter. When oil gets hot enough to smoke, put in fish with skin downward and cook until skin turns golden brown. Remove from oil and drain. Place on platter behind head. Remove oil from skillet.

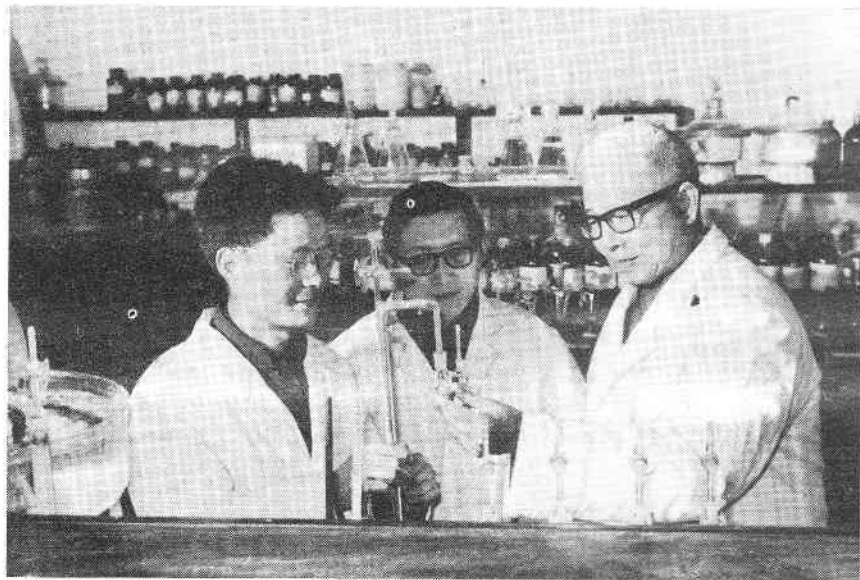
Mix together soy sauce, sugar, vinegar, water and remainder of starch mixture and wine.

Heat ¼ cup oil. Stir-fry scallion, ginger and garlic for a moment. Add sauce mixture and stir until it thickens. Pour sauce over fish.

Arrange parsley around fish on platter to make the fish look like a squirrel in the grass.



# THE ROCKY ROAD TO SCIENCE



With her husband Jiao Ruishen (right) in the laboratory.

## — A Husband-Wife Team

GUAN YINGQIAN

I MET Jiao Ruishen in 1947 on a ship bound for the United States where we were both going to study. We were drawn to each other by a mutual desire to help build up our backward China with modern science. In the 30 years since then, we have traveled a long journey together, sometimes smooth, though often rough. Even so our hopes have come true one by one.

I had graduated from the chemistry department of Jinling Girls' Arts and Science College in Nanjing (Nanking). In the United States I entered St. Louis University and majored in medical social work. After I got my master's degree in 1950 I worked in a hospital in Chicago and continued studying biochemistry at the same time. In China Jiao Ruishen had been an assistant in the chemistry department at Southwest Asso-

ciated University. He went to study microbiology at the University of Wisconsin, a world-famous biochemistry research center.

After World War II western countries had opened a new field in science — research on the utility of microbiology, specifically on antibiotics. Jiao Ruishen decided that when he had finished his studies he would go back to China to help build up this field and make it benefit the people. In four years he got his Ph.D. We had agreed that we would not waste too much time and energy on personal affairs such as love and raising a family. So it was not until 1951 when I was 28 and he was 34 that we were married. We were naive though. Our patriotism was genuine but we didn't realize that without a basic social transformation our country could not be saved by science alone.

After Jiao Ruishen got his degree we moved to Muscatine, Iowa where he worked in the lab-

oratory of a fermentation company doing research on various fermentations. Jiao Ruishen was a senior biochemist, one of the four highest wage-earners in this small town. I worked in the laboratory of Muscatine County Hospital. We collected more than a hundred cultures and two big boxes of reprints, hoping that once back in China we would be able to start work immediately.

The U.S. government would not permit Chinese science students to leave for home. We were already over 30 years and worried that if we couldn't get back there wouldn't be much time left for us to contribute to our motherland. Some of us Chinese scientists in America protested to the authorities. We wrote to Premier Zhou Enlai too, asking the Chinese government to help. In 1955, after a period of appealing and protesting, my husband and I, now with our eight-month-old baby Paul, boarded a ship for China, but

**GUAN YINGQIAN** is a researcher of the Shanghai Plant Physiology Institute.

not before being interrogated by the American customs authorities and having had all the cultures collected over many years confiscated.

### Hopes Begin to Come True

Guo Moruo, President of the Chinese Academy of Sciences, received us after we returned. Soon Jiao Ruishen was appointed deputy head of the Microorganic department of the Shanghai Plant Physiology Institute and I got work there too. Compared with the average wage in China ours was very high. We were given a five-room apartment on the institute's campus. A house keeper took care of our child and did the household chores. Thus we could give all our energy to scientific research.

Ruishen is interested in nothing but science. He can't even remember what kind of material the clothes he is wearing are made of. After living in Shanghai for many years he doesn't know the names of streets. Our family life revolved around our work. Visiting a park or seeing a film was a rare luxury. Every evening after the children were put to bed Ruishen and I would read books and explore a problem, often staying up deep into the night. To us this was a pleasure and a need.

After we returned to China we at once began research on riboflavin (vitamin B2) fermentation. In three years I wrote a paper on the correlation between morphological changes of mycelium and the biosynthesis of vitamin B2. In 1958 I was appointed to lead a group in the phytohormone department. In the early 60s our group established, for the first time in China, methods of isolating, separating and determining the three major phytohormones.

In 1963 we started work on a chemical weed killer that would

suit China's natural and economic conditions. The Chongming state farm, our institute's experimental base outside of Shanghai, asked us for a weed killer to be used in rice paddies directly after seeding. Here the shoots were not being grown in nurseries but from direct seeding. Chemical weed killer, FW 925, used abroad tended to kill the young seedlings as well. We worked out a new mode of application to kill barnyard grass in the direct seeding rice field. It was a new type and was successfully used first in east China and later throughout the country.

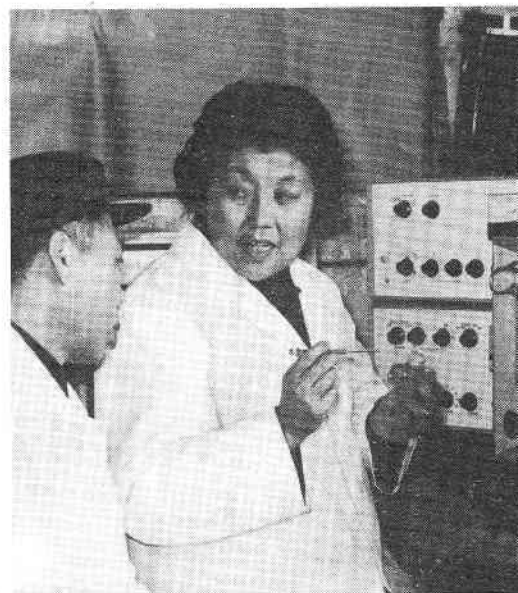
Ruishen and his colleagues had done even better. They did successful research on continuous microbial fermentation. The result enabled China to double the yield of acetone and butanol. They also raised her production of vitamin B2 to meet world standards. In connection with this they did a great deal of work on the respiratory chain mycelial and differentiation of molds and the regulation of antibiotic synthesis. They published 20 papers on their work. In 1963 at a national conference on microbiology Jiao Ruishen and many other scientists were received by Chairman Mao, Zhu De, Chairman of the National People's Congress, and other Party and state leaders. This encouraged us immensely.

### A Nightmare

Suddenly during the cultural revolution some people influenced by Lin Biao and the gang of four took control of our institute and accused us researchers who had studied abroad of having come back to China as spies. Late in 1968 Jiao Ruishen and I had been locked up separately in our place of work for "investigation." I was often subjected to midnight interrogation sessions. The questioners used our studying

at night as "proof" that we had been "spying at night." When the gang's followers learned that in the United States we had had a car, piano, refrigerator and washing machine they came to the conclusion, "Of course you are a spy. Otherwise why would anyone who had so much money and lived so well want to come back to China?"

I was furious. I cursed them under my breath, "You're scoundrels. That's all you value in life. You can't even grasp the idea that anyone would want to go abroad



Guan Yingqian (right).

to learn science in order to help build up China!"

Trying to extract a confession of spy activities from me, they threatened, enticed, cursed and beat me. Several months went by before I had a chance even for a glimpse of Ruishen, and then only from a distance. I could hardly recognize him—his hair had turned gray! What a hard time he must have been having! My heart ached with helpless rage and bitterness. If only it were a nightmare—but it was real.

One day at the end of 1968, because I had copied wrongly two

characters from a quotation by Chairman Mao, I was dragged before a crowd, criticized and declared a counter-revolutionary. The gang's followers warned me that if I didn't confess they would give me a harsher punishment or send me to prison.

I couldn't stand it any longer. Weeping, I wrote a letter to Chairman Mao and Premier Zhou to tell them that I was innocent, that their concern for students returned from abroad had been an inspiration to me, that I had done nothing against the country and that I had been persecuted by bad people. I wrote to my sister and brother asking them to take care of my children. The thought that I would never see Ruishen again broke my heart.

But in the end they still couldn't get anything against me and finally I was released. At once I hurried home to my children. My eldest son looked at me strangely and called me a spy. I think that for a mother there is no experience more tragic than this.

Ruishen and I were sent to work on a farm for two years and after that I helped train English translators while Ruishen did minor work in a laboratory until after the gang of four was exposed in 1976.

Now that awful time is over; things like that are not happening any more. During the last two and a half years most of the mess made by the gang of four has been cleared up. Scientific workers in my institute who had been persecuted for ten years were exonerated. Some who had followed the gang of four were criticized. A young woman worker who had guarded me during my detention realized that she had been deceived, came to my home and apologized with bitter remorse.

### Spring at Last

The eight of us at the institute who had studied abroad, including the director, deputy director and three department heads, are back at our jobs. I was made a section leader on a research subject. People who have suffered in a bitter winter appreciate the spring's warmth most. Once more Ruishen and I feel as hopeful and warm as when we had just come back to China.

China is now concentrating on modernization — exactly what we have prepared for all our lives. We feel the press of time. I am over 50 and Ruishen is 60 but we are anxious to shoulder heavier loads.

Ruishen, now a department head, is studying mechanisms in metabolic regulation of the biosynthesis of antibiotics. He also has three graduate students to guide. My section is working on hormonal regulation on the senescence of plant organs. Through this kind of research, for example, we hope to find out why a hormone can make cotton leaves wither and fall earlier. Success in this would facilitate machine picking.

Besides research I do other work in society. Last year I attended a national overseas Chinese conference as a representative from Shanghai and was elected to the committee of the Returned Overseas Chinese Association. The policy of treating the overseas Chinese and their families with equality and consideration for their special needs is a Party policy that had been sabotaged by Lin Biao and the gang of four. It is now being implemented in earnest.

The rooms in our apartment we had been forced to move out of have been returned to us. Once again we spend our evenings reading and studying, now joined by our two sons. Last year my younger son passed the college entrance examination and is studying in the computer department at Shanghai Science and Technology University. My U.S.-born oldest son who had been deceived by the gang of four into suspecting us has a searing wound in his young heart to heal. After he finished junior middle school at 16 he left home to work at farming in a village in Anhui province. There he studied hard by himself and learned English rather well. But he was deprived of the chance to enter college two times because our case had not been cleared up yet.

Early this year, in accordance with a new policy of finding work in the cities for children born abroad to overseas families, he was transferred back to Shanghai to work. Now he is preparing for a college entrance examination. Ruishen and I hope he will eventually join the journey devoted to China's science that we began 30 years ago.

The family.

photos by Xia Daoling



# TROUBLOUS TIMES

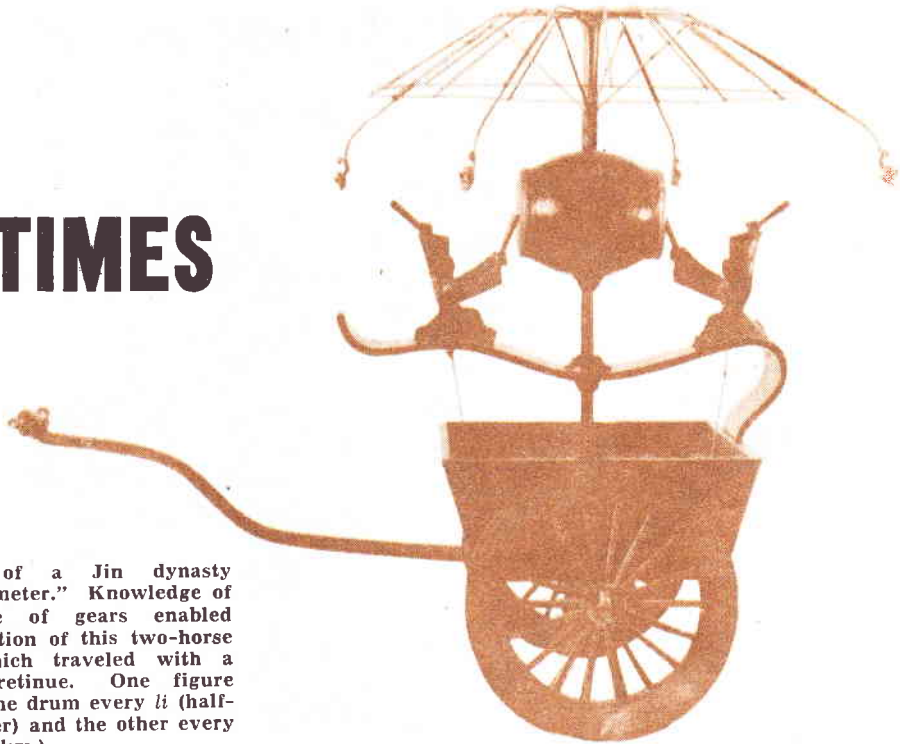
— Three Kingdoms,

Western and

Eastern Jin

JIAO JIAN

Model of a Jin dynasty "speedometer." Knowledge of the use of gears enabled construction of this two-horse cart which traveled with a lordly retinue. One figure struck the drum every *li* (half-kilometer) and the other every 10 *li* (5 km.).



**B**UILDING UP government forces to suppress the peasant revolts at the end of the Eastern Han dynasty (25-220), many local officials developed into warlords. To protect their own interests, the big landlords, who also had their own armed forces, placed themselves under these warlords and thus served to further entrench them. There was great rivalry among the warlords. Fighting among them caused much loss of life and disruption of agriculture in the Huanghe (Yellow) River valley.

One of these warlords, Cao Cao (155-220) conquered many of the others to become the most powerful in north China. The last Han dynasty emperor, Han Xian Di, in 196 fell into the hands of Cao Cao who made him his puppet. The emperor was finally forced to abdicate in 220 by Cao Cao's son, Cao Pi who declared himself emperor and called his domain the Kingdom of Wei. Luoyang was his capital.

While Cao Cao governed north China, to restore agriculture he instituted a system of agricultural settlements under military rule, recruiting farmers from among the starving peasants that were wandering over the country. Each settlement consisted of several dozens of men. If their own oxen were used for plowing they had to hand in 50 percent of their produce to the government, or 60 percent if the government supplied the draft animals. Though the men were forbidden to leave the land and thus became tenants of the feudal state, their life was more secure than that of other poor peasants' families. Soldiers, when not fighting, were encouraged to grow crops by this system. Thus more land was brought under cultivation and the problem of supplying grain for the troops was solved.

Another positive policy of Cao Cao's was his recruiting and utilizing of talented people. He ordered that whoever showed administrative ability and was able to command an army could be appointed an official.

## Changjiang Becomes Boundary

Cao Cao's policies consolidated his rule so that by 208 he was ready to go south to conquer the rest of China. He led an army of 200,000 against the warlord Liu Bei (162-223), a member of the Han dynasty royal house who controlled part of Hubei and Hunan provinces. An interesting incident in this campaign is the battle of Chibi. With only 10,000 troops of his own, Liu Bei joined in resistance with 30,000 troops of Sun Quan (182-252), another warlord who controlled the area south of the Changjiang (Yangtze) River. At Chibi (northwest of Puqi in today's southern Hubei) Cao Cao's fleet on the river was met by a smaller one of ten ships which was believed loaded with grain coming from the south bank. In fact they were loaded with reeds and straw soaked in oil. A kilometer away they burst into flame. The wind fanned the fire and sped the ships into the midst of Cao Cao's fleet. Since his ships were chained together, they could not get away and all were destroyed. Cao Cao's forces were routed back north, leaving half of them either dead from fire or drowned. This decided that Cao Cao's influence would not extend to the south of the Changjiang.

After Cao Cao's son proclaimed himself emperor of the Kingdom of Wei, Liu Bei in 221 named himself emperor of the Kingdom of Shu with Chengdu in



Soldiers going to work in settlement fields, a rubbing from a carved brick from Wei or Jin times found in Gansu province in 1972.

today's Sichuan province his capital. Sun Quan south of the Changjiang followed suit and in 229 named himself emperor of the Kingdom of Wu, of which Nanjing (Nanking) soon became capital.

Stabilization of the three kingdoms brought a brief period of quiet in which constructive activity was able to flourish.

### Agriculture Restored, Developed

The agricultural settlement system was extended in the Kingdom of Wei. Many water control projects were built in the valley of the Huaihe River. A device that could lift water from the river to fields on higher land invented by Ma Jun, one of the greatest mechanical engineers of ancient China, helped overcome droughts. Several decades of hard work by the peasants restored agricultural production in north China and raised it to new heights.

In the Kingdom of Shu the Dujiang Dam in Sichuan province, originally built in the Warring States period (475-221 B.C.), was placed under a special administrator. He had over a thousand people working on repairs and maintenance to make it more useful to irrigation. Sericulture and silk weaving were also developed to high levels. Shu brocade became famous as an item for exchange with the other two kingdoms. All this was the work of the celebrated statesman and strategist Prime Minister Zhuge Liang (181-234).

Guizhou, Yunnan and southern Sichuan, all part of the Kingdom of Shu, were inhabited largely by tribal peoples. One of Zhuge Liang's policies was to

make some of their headmen as officials of the kingdom. He also promoted advanced methods in technology and agriculture among them, which helped strengthen relations between the Han people and tribal peoples of the southwest.

Agriculture flourished in the Kingdom of Wu as well. Because of the constant warring during the last years of the Eastern Han dynasty large numbers of peasants from the Huanghe River valley moved south of the Changjiang, bringing with them the newer farming techniques. Some of the tribal peoples in the domain of Wu moved from the mountain areas and settled down to farm the land with the Hans, which also helped the growth of agriculture.

The Kingdom of Wu was noted for its shipbuilding. Some of the large warships on the Changjiang River had five decks and could carry 3,000 men. Better ships stimulated communication by sea. In 230 the Wu government sent General Wei Wen with a large fleet to Taiwan and from that time on relations were closer between Taiwan and the mainland.

### Western Jin: Brief Unification

In 263 Wei, most powerful of the three kingdoms, conquered Shu. Two years later the official Sima Yan (236-290) forced the Wei emperor to abdicate and himself ascended the throne. He changed the name of the dynasty to Jin. It is usually called Western Jin. With its capital at Luoyang it lasted from 265 to 316. In 280 Jin conquered Wu, bringing the whole country under one rule.

Following the conquest of Shu and Wu, Sima Yan abolished the system of settlements under military heads. Instead, peasants were allowed to own farmland but they had to pay taxes and do various kinds of labor service. Though they were now independent farmers instead of tenants their burden was not any lighter.

Sima Yan had granted the title of prince to 27 members of his royal family, giving them prefectures or counties as fiefs, and had allowed them to set up their own armed forces and appoint officials. His death was followed by 16 years of internecine wars as the princes vied for supremacy. As usual the people suffered.

### Nomads Again

Since Eastern Han times nomads from the north and west had been steadily moving into regions south of the Great Wall. These included the Xiongnu, Jie, Di, Qiang and Xianbei people. The Xiongnu moved to central and southern Shanxi. The Jie from central Asia moved into southeastern Shanxi where they lived under the rule of Xiongnu nobles. Many Xianbei moved south of the Great Wall during late Eastern Han times and some went as far as the southern side of the Huanghe River. Part of the Di people, originally inhabitants of southeastern Gansu, moved into eastern Gansu and Shaanxi. In these areas the Qiang lived interspersed among the Han people.

Early in the Western Jin dynasty there was a sudden increase to around a million of such people in the regions inhabited by the Hans. Most of the newcomers preserved their tribal organization and to a great extent their language and customs. The gov-

ernment compelled them to pay taxes and serve in the army. Han landlords made them their slaves or heavily-exploited tenants. Both newcomers and Han farmers became impoverished to the point where they left the land and took to wandering. There were continual uprisings.

In 301 the Western Jin government tried to force these indigent Han, Di and Qiang people in Sichuan to return to their native places. But some who had been able to get work for the landlords demanded they be allowed to stay till after the autumn harvest so that they could take more earnings with them. The government refused and sent troops to attack them. They rose in revolt at Mianzhu north of Chengdu under the leadership of Li Te of the Di people and defeated several attacks by the Jin troops. Later the vagrants in other areas along the Changjiang River also rose in revolt. This went on for over a decade and considerably upset things for the reactionary Western Jin rule.



Cao Cao.



These conditions provided opportunity for some of the tribal leaders to entrench themselves. A rebel army begun by a Xiongnu noble in 304 occupied the Jin capital Luoyang a few years later and in 316 occupied a second Jin capital set up at Changan. They captured the emperor and that was the end of the Western Jin dynasty.

### Eastern Jin plus Sixteen States

The nobles, officials and big landlords who had fled across the Changjiang River wanted to re-establish their power south of the river. With local big landlords, they gave their support to Sima Rui, a member of the Jin royal family, who in 317 founded the Eastern Jin dynasty with Nanjing as capital.

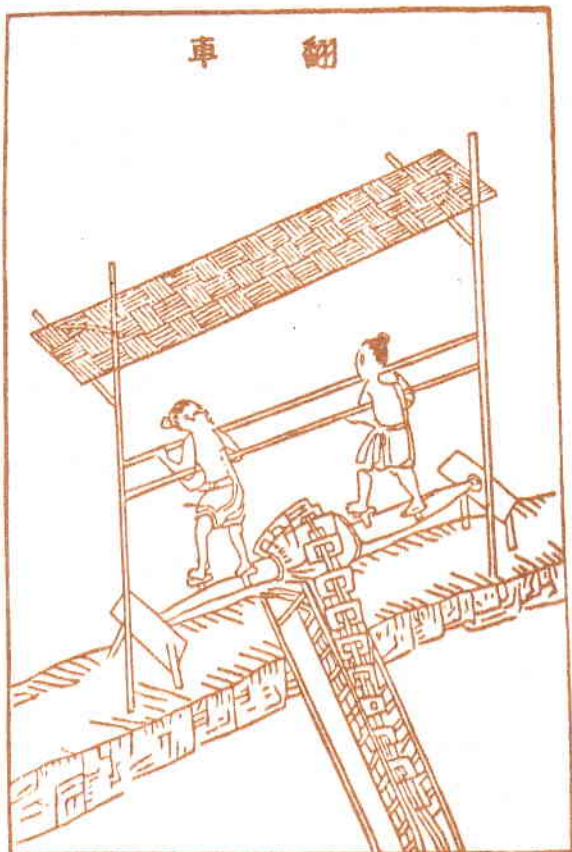
For 130 years following 316, when Western Jin fell, north China remained in a state of confusion in which heads of the various tribes vied with one another for land and power. Many kingdoms were

established. The 15 chief ones in the north and one in the southwest are called the Sixteen States, while Eastern Jin continued to exist in the south until 420.

In 351 Fu Jian (337-385), a Di noble, established what is known as the Former Qin Kingdom in Shaanxi. It became increasingly powerful and for a

time brought all of north China under one rule. In 383 Fu Jian led an army of 900,000 in an attempt to invade the south. It met 80,000 Eastern Jin troops at the Feishui River in Anhui which became the site of another famous story of military strategy. When the forces of Former Qin reached the river, they were asked by the general in charge of the Eastern Jin forces on the south side of the river to draw back a bit to leave room for battle on the north bank. The invading ruler agreed, thinking he could wipe out the Eastern Jin forces as they crossed the river. As the Former Qin army's withdrawal began, one of its aides, by prearrangement with Eastern Jin, began shouting that Former Qin had been defeated, and the withdrawal turned into a rout. Meanwhile Eastern Jin crossed the river and wiped out the bulk of the Former Qin troops.

This brought about the collapse of Former Qin. The warlords in the north kept setting up new states but none was strong enough to launch an expedition to the south. China was to remain divided into north and south till the end of the 6th century.



The "dragon's back-bone" water lift invented by Ma Jun.

#### Some Historical Names

<i>Former Spelling</i>	<i>New Spelling</i>
Tsao Tsao	Cao Cao
Liu Pei	Liu Bei
Sun Chuan	Sun Quan
Chuko Liang	Zhuge Liang
Szuma Yen	Sima Yan
Ma Chun	Ma Jun
Fu Chien	Fu Jian
Tsin dynasty	Jin dynasty
Hsiungnu	Xiongnu
Ti	Di
Hsienpei	Xianbei
Chiang	Qiang
Chieh	Jie

Eastern Jin dynasty mural of a noble pictured him with servants, attendants, soldiers and weapons to show his power and influence.





## Lesson 5

## Hotel Service

(在加拿大访华 旅游团 团长  
 (Zài Jiānádà fǎng Huá lǚyóutuán tuánzhǎng  
 (At Canada visit China tourist group group leader

史密斯的房间里)

Shímìsī de fángjiānli)  
 Smith's room in)

史密斯按电铃, 服务员敲门。  
 Shímìsī àn diànlíng, fúwùyuán qiāo mén.  
 Smith presses electric bell, attendant knocks on door.

史密斯: 请进。  
 Shímìsī: Qǐng jìn.  
 Smith: Please come in.

服务员: 您早。您有什么事?  
 Fúwùyuán: Nín zǎo. Nín yǒu shénme shì?  
 Attendant: You morning. You have what business?

史密斯: 麻烦你, 我的箱子坏了, 能  
 Shímìsī: Máfán nǐ, wó de xiāngzi huài le, néng  
 Smith: Trouble you, my suitcase broken, can  
 修一修吗?  
 xiū yi xiū ma?  
 repair?

服务员: 可以, 什么地方坏了?  
 Fúwùyuán: Kěyì, shénme dìfang huài le?  
 Attendant: Can, what place broken?

史密斯: 你看, 提梁掉了。还有  
 Shímìsī: Nǐ kàn, tíliáng diào le. Hái yǒu  
 Smith: You look, handle dropped off. Also have  
 这个皮包, 拉链坏了。  
 zhè ge píbāo, lāliàn huài le.  
 this leather bag's zipper broken.

服务员: 您交给我吧。修好以后, 我  
 Fúwùyuán: Nín jiāogěi wǒ ba. Xiūhǎo yǐhòu, wǒ  
 Attendant: You give me. Repair after, I  
 送来。  
 sòng lái.  
 bring (them).

史密斯: 好。这里管擦皮鞋吗?  
 Shímìsī: Hǎo. Zhèlǐ guǎn cā pǐxié ma?  
 Smith: Fine. (In) here handle polish leather shoes?

服务员: 管。您晚上可以把皮鞋  
 Fúwùyuán: Guǎn. Nín wǎnshàng kěyì bǎ pǐxié  
 Attendant: Handle. You evening can leather shoes

放在门外, 第二天早上  
 fàngzài ménwài, dìèr tiān zǎoshàng  
 put at door outside, second day morning

就可以擦好。  
 jiù kěyì cāhǎo.  
 can (be) polished.

史密斯: 我要刮胡子, 可是这个电动  
 Shímìsī: Wǒ yào guā húzi, kěshì zhè ge diàndòng  
 Smith: I want (to) shave, but this electric

刮胡刀的插销是两个头的,  
 guāhúdao de chāxiāo shì liǎngge tóu de,  
 razor's plug is two pronged,

房间里的插座是三个头的,  
 fángjiānli de chāzuò shì sān ge tóu de,  
 room in outlet is three pronged,

没法用。  
 méi fǎ yòng.  
 no way (to) use (it).

服务员: 我去找一个多用插座。  
 Fúwùyuán: Wǒ qù zhǎo yí ge duō yòng chāzuò.  
 Attendant: I go (to) find an adaptor plug.

顺便问一下, 你的刮胡刀是  
 Shùnbìan wèn yí xià, nǐ de guāhúdao shì  
 By the way ask, your razor is

用 220 伏特吗? 我们这里的  
 yòng 220 fú tè ma? Wǒmen zhèlǐ de  
 use 220 volts? Our here

电压是 220。  
 diànyǎ shì 220.  
 voltage is 220.

史密斯: 我的刮胡刀是 220 伏。我来  
 Shímìsī: Wǒ de guāhúdao shì 220 fú. Wǒ lái  
 Smith: My razor is 220 volts. I come

之前, 旅行社就告诉过这件  
 zhī qián, lǚxíngshè jiù gàosù guò zhè jiàn  
 before, travel service told this

事。你能找一个多用  
 shì. Nǐ néng zhǎo yí ge duō yòng  
 matter. You can find an adaptor

插座, 那太好了, 你能  
 chāzuò, nà tài hǎo le, nǐ néng  
 plug, that wonderful. You can

马上 找来吗?

mǎshàng zhǎo lái ma?  
right away bring (it)?

服务员: 可以。您还有别的事吗?

Fúwùyuán: Kěyǐ. Nín hái yǒu biéde shì ma?  
Attendant: Can. You still have other business?

史密斯: 没有了。

Shímìsī: Méiyǒu le.  
Smith: Not have.

服务员: 我现在就去找多用插座。

Fúwùyuán: Wǒ xiànzài jiù qù zhǎo duō yòng chāzuò.  
Attendant: I now go (to) find adaptor plug.

我把箱子和皮包拿去修,  
Wǒ bǎ xiāngzi hé píbāo ná qù xiū,  
I suitcase and leather bag take (to) repair,

下午就可以修好。

xiàwǔ jiù kěyǐ xiūhǎo.  
afternoon can (be) repaired.

史密斯: 好, 谢谢你。

Shímìsī: Hǎo, xièxiè nǐ.  
Smith: Fine, thank you.

服务员: 不谢。

Fúwùyuán: Bú xiè.  
Attendant: Don't thank.

### Translation

(In the room of Mr. Smith, leader of the Canadian China tour group)

Smith presses the electric bell, and attendant knocks on door.  
Smith: Please come in.

Attendant: Good morning. Can I help you?

Smith: I'm sorry to bother you but my suitcase is broken. Can it be repaired?

Attendant: Yes, where is it broken?

Smith: See, the handle has fallen off. Also the zipper on this leather bag is broken.

Attendant: Give them to me. I'll bring them to you when they are repaired.

Smith: Fine. Do you polish shoes here?

Attendant: Yes. Put your shoes outside the door at night and they'll be polished the next morning.

Smith: I want to shave, but the plug of this electric razor has two prongs and the outlet in this room is for three prongs. I can't use it.

Attendant: I'll get you an adaptor plug. By the way, is your razor 220 volts? Our current here is 220.

Smith: Yes, it's 220. The travel service warned me about that before I came. If you can get an adaptor plug that will be fine. Can you bring it right away?

Attendant: Yes. Is there anything else you want?

Smith: No.

Attendant: I'll go to find an adaptor plug now. I'll take the suitcase and leather bag for repairs and they'll be done this afternoon.

Smith: Fine, thank you.

Attendant: Don't mention it.

### Notes

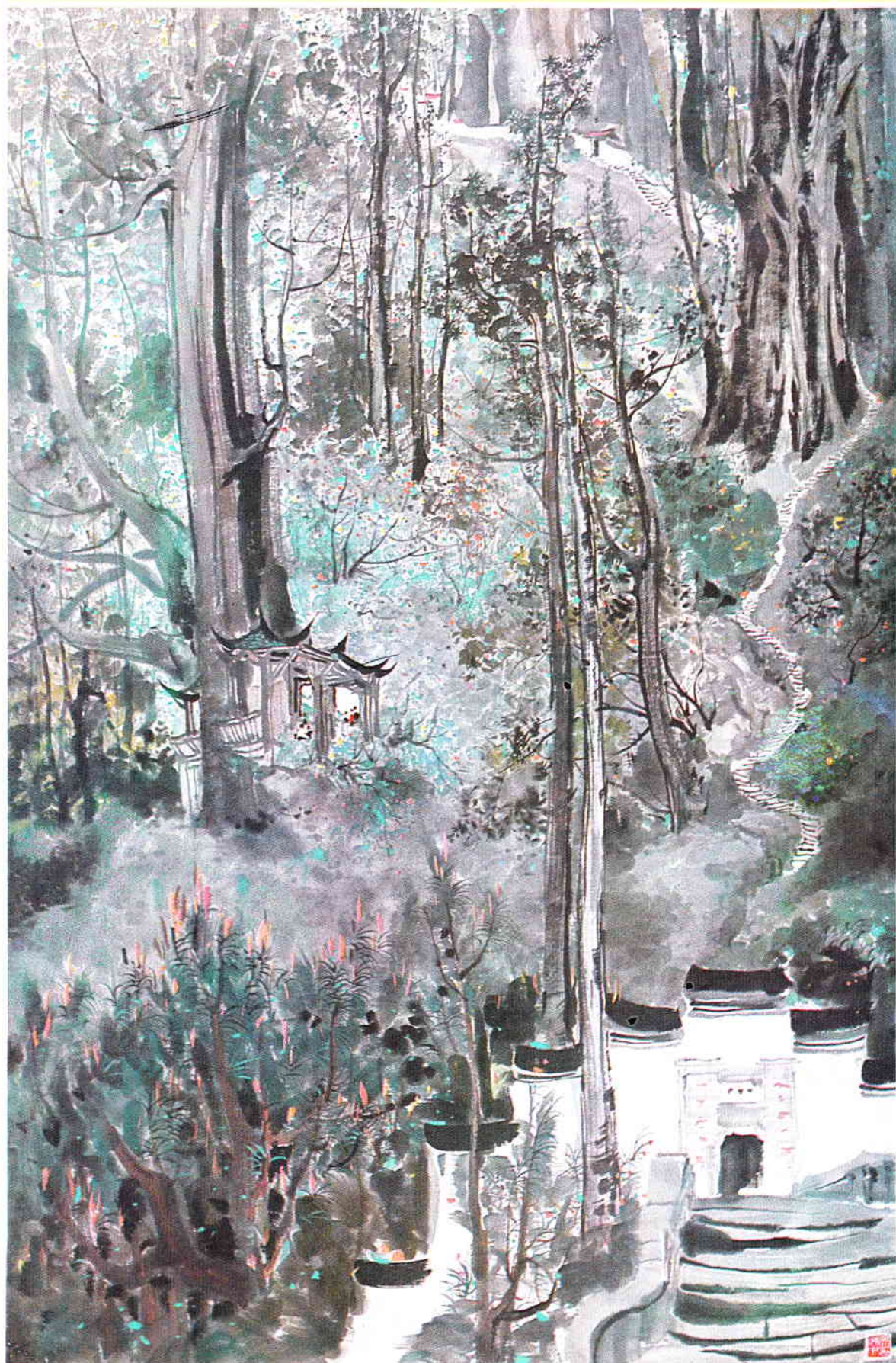
1. **The same verb twice.** In colloquial Chinese you will often hear the same verb spoken twice in succession, as in: *Nǐ xiūxiūxiū ba* 你休息休息吧 (Rest a bit). This means the action is expected to be of short duration. Other examples: *Wǒ xiǎng cācā píxié* 我想擦擦皮鞋 (I want to polish my shoes), *Wǒ yào xiūxiū xiāngzi* 我要修修箱子 (I want to repair my suitcase). Grammatically this is called reduplication of verbs.

2. **Hǎo 好 after a verb means finished.** You have already learned the use of the character 好 meaning well or good. When it is used after a verb as in the phrase *xiūhǎo xiāngzi* 修好箱子 (repair the suitcase), it means the job of repairing the suitcase is finished. Another example is *Píxié cāhǎo le* 皮鞋擦好了 (The shoes are polished). The grammatical name for this construction is "complement of result", meaning the result of the action has been achieved.

3. **Kěyǐ 可以 for can and may.** The literal translation of 可以 is either can or may. It is a frequent reply to requests, with the meaning of "yes" or "it's possible". While it is also used in answer to requests for permission, very often its usage simply means that something is possible, as in *Nǐ xiànzài kěyǐ qù xiūxiūxiū* 你现在可以去休息休息 (You can go and rest now).

### Correction

Regarding the headline "Eastern Han Peasant Revolts — Red Eyebrows, Greenwoodsmen, Yellow Turbans" on p. 72 of the April 1979 issue of *China Reconstructs*, it should be pointed out that the first two actually took place during the Wang Mang regime, before the Eastern Han dynasty officially began.



Mountain and Water (traditional painting)

Wu Guanzhong



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