<u>China</u> Reconstructs

VOL. XXVIII NO. 4 APRIL 1979



China's Energy Problems
Chaozhou Embroidery
Rewi Alley on China-U.S. Friendship



CHINA RECONSTRUCTS

PUBLISHED MONTHLY IN ENGLISH, FRENCH, SPANISH, ARABIC AND BI-MONTHLY IN GERMAN BY THE CHINA WELFARE INSTITUTE (SOONG CHING LING, CHAIRMAN)

中国建设

VOL. XXVIII NO. 4

APRIL 1979

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Front: Chaozhou embroidery. Xie Jun Back: A drilling platform at sea. Zhang Haishan

Editorial Office: Wai Wen Building, Beijing (37), China. Cable: "CHIRECON" Beijing. General Distributor: GUOZI SHUDIAN, P.O. Box 399, Beijing, China.

Articles of the Month

Energy in China

Does China have an energy crisis? What about cooperation on exploiting energy resources? These and other questions are answered in interviews with leaders in the field.



Progress with Liver Cancer

Page 11



Early detection, a deciding factor in the successful handling of cancer, has become much easier with the use in China of AFP, a protein substance used in simple blood tests taken in mass screening.

Home of Overseas Chinese

Page 14

Almost every family in Shantou (Swatow) has relatives abroad. Revisiting the area after 40 years, our reporter describes the changes and interesting scenic spots he found.



Recalling Some 'Good Americans' Page 23

Writer and poet Rewi Alley reminisces about a host of Americans who for decades struggled, in spite of hostility and indifference, for normal relations between the two countries.

The Plum Blossom Is Not a Plum Blossom

Page 47

Horticulturist Chen Junyu says that the *mei* flower, a native of China, is neither an apricot nor a plum. In any event, the winter-blossoming *mei* has long been dear to Chinese artists and poets for its staunchness in the face of adversity.

Famous Fossils Page 60

Breathtakingly beautiful plant and animal life of 15 million years ago shown in pages of color pictures.



Page 6



Like New Format

After reading your January 1979 issue I just had to let you know how delighted I am with your new format and style!

The issue was just full of interesting and informative articles and photographs which tell of the history of China, as well as informing us about the new socialist China.

The travel section was especially interesting, as was the section on trade. In fact, the entire issue was outstanding!

This is the type of periodical we can give to the participants on our China Study Tours, knowing that the magazine will be read by them prior to going to China. In this way, we will be furthering our cause of friendship between our two peoples.

Austin, U.S.A.

The new format of *China Reconstructs* is great! It is much easier to read and fits in with other books and notebooks on my desk. The same excellent articles have been maintained.

The same excellent pictures have not suffered in the reduction in size. Two sections of color stand out, the Weifang New Year pictures, any one of which would be attractive framed, and the section on stamps. The latter because I have a collection of stamps of the PRC and try to keep up with the new issues.

Tucson, U.S.A.

Novato, U.S.A.

R.A.D.

C.M.

Thanks for the new design of *China Reconstructs.* It's great and so easy to handle. Also its size is just right to put in a bag and take along — to read in the park or wherever. For the first time I was able to race through the magazine from cover to cover simply because I took it with me wherever I went. Enjoy every page of it!

F.G.H.

Sino-U.S. Friendship

Please have a big article about the January 1st USA/China friendship! We are very, very excited in the U.S.A. about our new Asia friends!

In my university I studied Chihese history; I really understand how the imperialists made China weak. In the past China was wronged! We all knew this! But now we must look at a new world, a new China. You are respected. I wish for the very best between our two peoples. I hope to see Beijing (Peking) one day!

M.G.

A.S.H.

A.G.C.

Z.S.

Edison, U.S.A.

The establishment of diplomatic relations between the People's Republic of China and the United States is the best news for us Chinese living abroad in all countries. We considered this as the best gift to the entire Chinese race by the government of Chairman Hua Guofeng.

Vancouver, Canada

Scientific Socialism

Ever since I started reading *China Reconstructs*, I have an impression that most of your articles relate to scientific socialism in China. At the same time, they are very helpful to forming a revolutionary culture in those countries who are now struggling to free themselves from the exploitation and oppression of imperialism, especially the two superpowers.

I read an article entitled "Launching the Drive to Modernize Science" in your July 1978 issue and discussed with my friends what is the socialist line that China has adhered to and what is the revisionist line. I believe, if we firmly grasp the teachings of Mao Zedong and other great Marxists, the slogan of "a bright future for humanity" will surely be realized.

Magdalena, Colombia

Support for Arab Peoples

China Reconstructs is a wonderful magazine which reflects the characteristics of building socialism in China.

I hope your magazine will increase its pages and enlarge its special columns on science and culture.

The fundamental principle of China's foreign policy is to unite the countries and peoples who are struggling for freedom and independence. Since the birth of the People's Republic of China she has stood on the side of the Arab people, especially the Palestinian people, in their struggle to recover lost territories and obtain the right to decide their own destiny and return to their homeland.

Barika, Algeria

Article by Rewi Alley

I like your articles touching on past history. The article "From the Old China to the New" by Rewi Alley is very good. I hope to read more of his articles. He is a real historian. Other articles on Chinese history are good too. T.H.

Dortmund, Federal Republic of Germany

Peasant Life

Articles such as "A Commune Family" in your September 1978 issue have seldom been published in your magazine. This one gave readers a general picture of peasant life. We can see from it the marked improvement in their life in comparison with that before liberation. There are also deep changes in their way of life, spiritual outlook and their centuries-old customs. The modernization of agriculture has had a profound effect on their way of life.

Your medical supplement is good. I like particularly the article "Gallstones Removed Without Surgery." It's great progress to have gallstones removed without a surgical operation, thus saving patients pain and being cheaper. B.R.

Caen, France

Barefoot Doctor

Your magazine has taught me a lot. What interests me is how the barefoot doctors have tried to save people in the rural areas, using herb medicines to cure some ailments such as asthma. Also how the doctors at the hospital have specialized in some field. The language and writing in general are all clear to understand. The drawings in the magazine are all attractive. The language corner also teaches a lot, and this has helped me greatly though the pronunciation is difficult.

S.P.A.

Dodo-Amanfrom, Ghana

History Series

Your new series of articles on Chinese history has turned out to be what I had hoped for. It will be most interesting to follow it during 1979. It's rather frightening when one realizes, by reading these articles, how little knowledge one has had of China and its history. To be able to grasp the development of modern China, I think it is of utmost importance that one has a fairly good command of China's earlier history.

T.L.

Lünd, Sweden

Lack of Charts

There is a lack of statistical charts and maps with your articles on economic and scientific subjects. These would be helpful for readers to get a clearer conception of China's socialist achievements.

J.P.T.

Paris, France

CARTOONS



What are you doing? The bookshelves are too far away. by Hua Junwu



Family Outing

by Yongkun and Jianguo



Across the Land

Frozen Reservoir

T HE Qilian (Chilien) Mountains which stretch for 1,200 kilometers along the border of Gansu and Qinghai (Kansu and Chinghai) provinces, are covered with ice and snow most of the year. The melting runoff forms rivers which irrigate more than 600,000 hectares of farmland and large stretches of pastures in the Gansu corridor north of the mountains. The local people call it their "reservoir of ice."

Last year an expedition to study the glaciers was organized by the Lanzhou Institute of Glaciology and Cryopedology of the Chinese Academy of Sciences and the Geography Department of Lanzhou University. After four months of investigation over a large area, it came back with much valuable scientific data which will be useful in greater utilization of these water resources in order to convert the Gansu corridor into a grain-growing base.

> Examining the rings of an old pine for what they can tell about changes in climate in the area.



Studying the shape of the terminus of a glacier.



Digging a trench at 5,200 meters to see how a glacier was formed.



Winter wonderland is a crevasse of icicles.

Three-dimensional photographic surveys were made of the main Qilian Mountain glaciers. Photos by Zhang Shenggui

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What About Energy in China?

— Leaders of the oil, coal, water conservation and electric power industries answer your questions



Oil, coal and water power are and will continue to be China's three main sources of energy for some time to come. Deposits or potential for them are among the world's highest. China has entered the world's top ten in annual crude oil production. Her annual output of coal surpassed 600 million tons, bringing her from tenth place at the time of liberation in 1949 to third today. In output of electric power she has risen from 23rd to seventh. Last year, oil, coal and power all topped the state plan.

These, however, are only initial successes. In the past three decades output has not always been able to keep pace with needs, as is frequently the case in the first stages of economic development. But oil production grew at a rate faster than that of the economy as a whole, an average increase of 26.2 percent per year. For coal this figure was 10.6 percent. Though China has made progress in power production, capital construction in this field has fallen short of the state plan in the past few years. Coal and power have been weak links in the national economy.



Loaded tank cars ready to leave the Shengli oil field.

Today the drive for modernization presents a new challenge to the energy producers. The state plan calls for building or completing 120 major projects before 1985. Industrial production is to grow an average of 11 percent and that of agriculture, 4-5 percent a year. This and the rise in the standard of living will pose rising energy demands at an unprecedented speed.

Today the cry of "oil exhaustion" is heard in many countries. Some of our readers have written asking: Does China have an energy crisis? How is China going to meet her increasing demands for energy? Can she undertake large-scale economic construction and at the same time export large amounts of oil and coal? To get the answers, our staff posed the following questions to leading people in the oil, coal and water conservation and electric power ministries. Following is what they said.

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Is there an energy crisis in China?

YAN DUNSHI, Vice-Minister of Petroleum Industry and Chief Geological Engineer: Since 1970 oil reserves have become a problem for some countries; in others, production has dropped. Production from newly discovered reserves is insufficient to meet rising consumption. This imbalance between supply and demand has led to an "energy crisis." China does not share this problem. Both production and new located reserves have been increasing steadily since 1949.

In the years shortly after liberation China's oil output was only a little over a hundred thousand tons. Prospecting and extraction were mainly in her west.

Toward the end of the 50s oil prospecting started in vast areas of east China. The discovery of the Daqing (Taching) field in northeast China refuted, both theorywise and in practice, the assertion that "China is poor in oil." In the course of opening up this big field China has further developed her own theories of oil exploitation and brought an end to the day when she had to rely on foreign oil.

In the early 60s new reserves were found in the Bohai Gulf. With different geological conditions than the Daqing field, it has many pools with different qualities of oil. Among them are high-yielding sandstone reservoirs and paleo-limestone hills buried long ago. Prospecting this field further added to China's theory of oil geology and helped geologists improve their exploration techniques. Between 1949 and 1965 China's oil output increased by 93 times. From 1966 to 1978 her crude oil output grew at an average rate of 20 percent per year. From being "oil poor," China became an important producer of oil and in the late 60s began to export it.

ZHANG MINGLI, Head of the Planning Department in the Ministry of Coal Industry: Coal is the chief fuel in China today, supplying 70 percent of the country's energy needs. This is a higher percentage than in most industrialized countries and as China herself becomes more industrialized, this proportion will change. But the quantity of coal needed must also increase.

From 1949 to 1978 China's annual coal output went up from 30 to 600 million tons, averaging a growth of 10.6 percent per year. When liquefaction and vaporization can be used industrially, coal will play an even bigger role in China's economy.

YOU JISHOU, Engineer and Deputy Head of the Planning Department in the Ministry of Water Conservation and Electric Power: Although we don't have an energy crisis, we have our own problems rising in the course of development. For instance, though our country's electricity output has increased by 57 times since 1949, an average annual rise of 15 percent, and we have built nine power grids, each with a capacity of 2 million kilowatts, the supply cannot keep pace with the increasing demand. Some areas still have a power shortage. There are many reasons. An important factor was the influence of Lin Biao and the gang of four in the past decade. Our The central control room of the Beijing-Tianjin-Tangshan power grid. Mechanized extraction at the Datong coal mine, one of China's biggest. A new hydroelectric station under construction on the Wujiang River in Sichuan and Guizhou provinces.



Yang Wumin







APRIL 1979

lack of advanced technology for building water projects has also slowed down building of big power stations. Then, too, the existing equipment has not been fully utilized and our management is not very scientific. We have a lot to do if we are going to properly serve our country's modernization.

What are the main problems in exploiting China's energy resources?

YAN DUNSHI: After the fall of the gang of four the Party Central Committee called for building ten oil fields as big as Daging by the end of the century. This means that our oil output should rise to ten times that of Daqing's at present, and our oil industry should rank among the world's advanced. We must solve many problems in order to reach this goal.

We must do a lot of prospecting both on land and on the continental shelf, and do geological research in the different oil and gas sedimentary basins and areas. We must find out the laws of oil and gas formation in different places and under different geological conditions, and develop the theory needed for locating big high-yield fields. All this requires advanced technology, skilled workers and large quantities of research equipment. It is not easy to get these right away.

Next, to open more oil fields, especially under the sea, we need to strengthen our industrial base and make many kinds of oil extraction equipment that we have never made before. Furthermore, the exploitation of oil fields in remote areas or under the sea will need a big investment. While the state is undertaking speedy construction on all fronts, it cannot meet all the necessary outlay for the oil industry.

ZHANG MINGLI: In the coal industry our urgent task is to improve management and do things according to economic laws. On the other hand, we must raise our technological level, especially mechanization of coal extraction. We must concentrate on opening new mines. Building a mine takes a long time, therefore we must schedule construction so that some open every year. If we don't solve these problems it will be a much longer time before we can utilize our coal reserves.

What does China have in energy resources?

YOU JISHOU: China has very rich water power potential estimated at 580 million kw. If even half this potential were utilized, it would be equal to the power produced by 700 million tons of coal. We have numerous rivers; 1,500 of them drain valleys of a size above 1,000 square kilometers. In our country, water resources and power from petroleum and coal complement each other: the north is rich in coal, and the south in water; the coastal regions have abundant oil, the hinterland, water. This is a help in keeping our supply balanced.

The southwest, where petroleum and coal are not abundant, has 70 percent of the country's total water resources. The Changjiang (Yangtze) River valley accounts for 40 percent. It is possible to build a power station with a generating capacity of 25 million kw. at the famous three gorges on the upper reaches of

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the river. The Jinsha River drops 3,000 meters passing through the Hengduan Mountains in Yunnan province, providing much opportunity for hydroelectric power.

A section of the upper Huanghe (Yellow) River, China's second biggest, drops 1,300 meters over 900 kilometers and runs through some 20 gorges. Power stations built at different levels along the way will turn this section into a major power center for north China. The Zhujiang (Pearl) River in the south and the Lancang in Yunnan, the Yarlung Zangbo in Xizang (Tibet) and the Songhua in the northeast can all be used to generate great amounts of electricity.

YAN DUNSHI: China's oil reserves did not attract world attention until the 60s. Now some oil geologists have given estimates of 15,000 million, 55,000 million and even 144,000 million tons. The real figure can be known only after prospecting has been done for several generations.

Beneath China's 9.6 million square kilometers of land and her continental shelf are many sedimentary basins favorable for oil formation and preservation. An oil field was recently located in an ancient buried hill in the Bohai Gulf area. The western part of China, too, promises to become an important site for oil reserves. It has lines of sheer-compressive anticline zones which due to the compression of the Indian and European plates usually have a larger closure area, thus greater possibility for oil. Small but highyielding fields have been discovered in smaller 700square-kilometer sedimentary basins scattered in various parts of the country. This means that we must reestimate the reserves of the small and medium-sized basins.

So far only ten percent of the sedimentary basins have been prospected, and surveys of the continental shelf have only begun. The prospects for oil reserves are bright indeed.

ZHANG MINGLI: China is rich in all kinds of coal. The seams lie close to the surface and some are found in every province and autonomous region. North China has the largest deposits and produces the major part of our coking coal. In Shanxi province alone, workable reserves are estimated at over 200 billion tons. In other words, at an extraction rate of a billion tons per year, these can be mined for 200 years. In recent years stone coal has been discovered in some 200 counties in south China. Estimated reserves exceed 100 billion tons.

What is the policy on tapping energy resources? Is there any danger of squandering China's fossil fuels?

YAN DUNSHI: Right now we have to use a lot of fossil fuels, but our basic policy is to use them economically while tapping all available energy resources, including natural gas, water power, solar and geothermal energy, marsh gas, ocean tides and atomic energy. At present we consume much less oil than industrialized countries. But in the course of modernizing our country, this consumption will naturally rise. We want to make sure, however, that oil does not become the major fuel. Wherever available, coal

or water power will be used to save oil for export. This will be a help to China's modernization and to countries trading with us.

YOU JISHOU: Our policy for the power industry is to give thermal and hydroelectric power equal atten-Where water power is available, projects of tion. large, medium and small size will be built simultaneously, with large ones as the backbone. Since 1949 some 100 big power stations have been constructed. They include Liujia Gorge in Gansu, Danjiangkou in Hubei, Gongzui in Sichuan and Xinanjiang in Zhejiang (Chekiang). There are over 86,000 small ones in various parts of the country. According to a long-range plan, we are now concentrating our efforts on building 20 large projects on big rivers in the southwest, northwest and central south and at the Changjiang River gorges. Work is in full swing on the Gezhouba project in Hubei. It is the largest to date on the Changjiang, with a generating capacity of 2.7 million kw, and an annual designed output of 13,800 million kilowatt hours. This is three times the total generated in all China in 1949. In addition, a dozen large thermal power plants are being built where coal is available.

ZHANG MINGLI: The government has taken steps to raise production in the coal industry. By 1985 eight more large coal mines will be completed which by the end of the century should raise annual output to 2,000 million tons. The task ahead is arduous. The fundamental way to achieve this lies in mechanization. It is, therefore, imperative to bring about greater mechanization in all branches of the industry in order to achieve high-efficiency, low-cost results. We must think how to speed up mechanization both in constructing large coal bases and expanding and tapping the potential of old mines and those of medium or small size. We hope to improve mechanization as soon as possible by making full use of existing equipment, learning from the experience of advanced countries and introducing the latest know-how and machinery from abroad.

What are the prospects for cooperation with other countries in tapping energy resources?

ZHANG MINGLI: China has favorable conditions for exporting coal. She is one of Asia's major coal producers and close to Japan and southeast Asian countries who lack this kind of fuel. We have recently had inquiries from Japan, France, West Germany, Romania and Hongkong about the possibility of cooperating with China in extracting her coal resources. The prospects are good. Payment can be by compensation in our own product, I am sure that other ways of cooperation can be worked out.

YAN DUNSHI: Many ways of cooperation are being followed internationally, such as sending our technicians for study in friendly countries and with oil companies, inviting technicians from abroad to assist us, acquiring advanced technology and equipment or providing technical service for individual projects, and concluding contracts for specific projects or exploration of specific areas. There are many ways to cooperate with friendly countries in oil exploration.



Progress in Treating Cancer of the Liver

XIMEN LUSHA

SEVERAL months ago I visited the special liver cancer ward in Zhongshan Hospital of the Shanghai First Medical College. In one of the rooms I met six patients, four of them young men in their twenties and two in middle age. They all looked too healthy to be suffering from this killer disease.

Zheng Gaofa was a 21-year-old worker at the Shanghai Building Machinery Repair Plant. Before he was hospitalized he had been in excellent health. His appetite was good and he worked hard. He even took part in cross-country running in winter. But in a mass screening for liver cancer toward the end of 1977 he was shocked to learn that he might have the disease in an early stage and should be hospitalized as soon as possible. He came in January 1978.

XIMEN LUSHA is a staff reporter for China Reconstructs.

Liver cancer operation at Zhongshan Hospital in Shanghai.

A careful examination verified it and he underwent two operations, one to remove a malignant tumor 1.7 cm. in diameter and another for one 4 cm. in diameter.

Another patient was 25-year-old Tang Shigen, a bus driver for the Shanghai Transportation Company. His case was detected last September in a general survey for liver cancer in his company. He was admitted to the hospital in October. "When they told me I had cancer," he said, "I didn't believe it. I was in good health and hadn't taken a single day's sick leave in all my four years on the job. But they confirmed it. I guess I wasn't so healthy after all."

A Step Forward

"How is liver cancer detected without any symptoms?" I asked Dr. Yu Yeqin, a surgeon and Lin Zhiying, woman cancer specialist.

"Liver cancer is a hidden enemy," Dr. Yu said. "Early detection is particularly difficult. When come with enlarged liver, jaundice patients and ascitic fluid, the cancer is already in its middle or late stage and it is very difficult to save them. Most tumors less than 5 cm. in diameter show no symptoms. When we began to study them there was little literature either at home or abroad. In 1977 Dr. Okuda, a Japanese liver cancer specialist, reported 20 cases of minute liver cancer. Sixteen of these, however, were discovered only during autopsy. We had also occasionally found such cases in surgery or when cancer nodules ruptured. In 1971 we had begun to check the presence of alphafetoprotein



A district hospital carries out a livercancer screening at a factory in Shanghai.

(AFP) in the blood in mass surveys for liver cancer. The method uncovered many cases of minute liver cancer." The cancer in the patients I saw in the ward had been detected this way, Doctor Yu said and continued. "Early detection makes early treatment possible, especially surgery which gives rather satisfactory results."

Dr. Yu showed me a batch of files, records of liver cancer patients they had treated over the past few years. Pictures of the tumors removed were included in each of the records. The smallest tumor found was 0.8 cm. in diameter. Formerly the oneyear survival rate of patients who came with symptoms was only 10-20 percent, said Dr. Yu. In recent years, however, early surgery at Zhongshan Hospital has raised the one-year survival rate to 83.3 percent, while the two and three-year survival rate rose to 70.5 percent. Many of the patients went back to work.

Seeking out the Patients

"As cancer specialists," Dr. Lin said, "it's our duty to find more effective ways of treating this killer disease. In 1970 we realized that many of our patients came from specific areas. This gave us food for thought. Certain localities in Linxian county in



Doctor Yu Yeqin with his patient Zheng Gaofa (left).

Henan (Honan) province, for example, had the highest incidence of cancer of the esophagus. Did liver cancer also have its areas of high incidence?

"We then sent three of our doctors and two from the Shanghai First Medical College to the countryside in Jiangsu (Kiangsu) province to see if they could find such a center. Since 1971 teams of medical workers and researchers from our hospital, the Shanghai Oncological Hospital, Shanghai Cancer Research Institute and the Bio-chemistry Institute of the Chinese Academy of Sciences have visited by turns the countryside in the province every year, setting up a liver cancer study and treatment program. They held meetings with local medical personnel and barefoot doctors, visited peasant families and those with liver cancer patients, and studied local climate, geographical factors, the agricultural situation and the peasants' living conditions. This provided the basis for research in cancer distribution and its causes.

"At the same time the teams carried on a largescale screening among the population. All persons over 16 were examined. It was in this screening, using AFP as one of our indicators, that we found quite a number of minute liver cancer cases with no symptoms. The method is quick, simple and accurate. It only requires a drop of blood from the finger for laboratory tests and the technique of mass screening can be handled by barefoot doctors after brief training.

"From 1971 to 1974, with the help of the local medical departments and barefoot doctors, our teams completed a general survey of the 200,000 people in one area, discovering 270 liver cancer cases, quite a few of which were in their early stages. These were sent to the county or commune hospitals and treated surgically whenever possible. The results were rather good.

"We also discovered that the age group most easily affected by liver cancer is younger than we had thought. Instead of only people in their fifties, it included many in their thirties and forties." A general screening among people working in Shanghai's industrial, transport and commercial fields was also done between 1971 and 1976. Fifteen hospitals participated and 1,967,511 people between 16 and 60 were involved. Of 300 cases detected, 134 were early-stage. Most of these cases were confirmed in surgery or by pathological examination.

Practice has shown that AFP is effective in detecting liver cancer in its early stages. The method has been improved so that diagnostic accuracy is now 80 percent. With no cure for cancer as yet, early treatment is vital. AFP used in screening procedures facilitates early treatment.

Early Treatment

With the increasing accuracy of early diagnosis with AFP came a new demand for more effective treatment of liver cancer. Clinical practice and research at Zhongshan Hospital has raised treatment to higher levels.

Surgery is still the best way of treating minute liver cancer. Before surgery, however, the tumors must be located. If less than 5 cm. in diameter, they cannot be located by isotopic scanning. Early in 1978 doctors at Zhongshan Hospital succeeded in locating them on 30 patients with celiac and hepatic arteriography, though their equipment was not the best. This method has largely solved the problem of locating minute liver cancers.

The resectability and survival rates of early minute cancer patients are higher than those of middle or late-stage cases. Around 70 percent of the patients live three years after surgery. Some have lived five years and resume normal lives.

Bloodless hepatectomy — surgery on a liver from which the blood circulation has been temporarily diverted — is a difficult operation. It was first performed abroad in 1974. Before cutting out the cancer, all blood vessels leading to the liver are blocked. At the same time a solution at 4°C. is injected to keep the liver cells alive. If the cancer is very close to a major blood vessel, bloodless hepatectomy allows the surgeon to cut and repair the vessel without the risk of mass hemorrhage.

China's first successful bloodless hepatectomy was performed at Zhongshan Hospital in August 1978. The patient was Zheng Gaofa, mentioned above. The tumor, 4 cm. in diameter, was imbedded near the inferior cava vein, formerly a "forbidden area" to surgeons.

Dr. Yu, who took part in the operation, said, "Several years ago we used liquid-nitrogen cryotherapy with cases of this kind. Most patients did not survive beyond one year. In Zheng's case we decided to use bloodless hepatectomy. First we did the operation many times on animals to become familiar with the technique and the possible physiological and physiochemical changes during the operation. The operation on Zheng was successful." Last November 28 doctors of the Zhongshan Hospital performed their second bloodless liver surgery, again with success. These achievements will no doubt help China catch up with world levels in liver surgery.

(Continued from p. 33)

with the Xiongnu in 18 verses known as the *Eighteen Laments*, some of the most beautiful poetry of ancient China. Some of these, set to music, are heard in the play.

When the party gets back to the Han capital, Zhou Jin tells Cao Cao bad things about Dong Si and the Prime Minister orders Dong Si to kill himself. Cai Wenji rushes to the palace to state the truth of the matter. Realizing his mistake, Cao Cao rescinds the order and has Zhou Jin punished instead.

In the eight years that follow, Cai Wenji collates and sorts out over 400 of her father's writings. Her husband is killed in battle and the Southern Xiongnu king sends her two children to her. Then in the play she pours out her joy at the reunion with them and growth of friendship between the Han people and Southern Xiongnu in a song *I See My Blooming Years Again.* Actually the words of the song were not written by Cai Wenji but by Guo Moruo in her style. Finally, with Cao Cao as go-between Cai Wenji marries Dong Si.

One of the most interesting aspects of the play is the view of the character of Cao Cao advanced by Guo Moruo. Previously Cao Cao had been condemned as a treacherous official, particularly in tales which form the basis of the popular 14th century novel *Romance of the Three Kingdoms*. Guo Moruo's findings showed that in fact Cao Cao had far-reaching ideals and was good at recognizing talent and seeing that it is put to proper use.

Guo Moruo wrote the play in 1959 during the great leap forward when a lot of new and creative assessments were being made. Excited by his idea, he wrote it in only seven days and delivered it personally to the Beijing People's Art Theater. Staged in Beijing, it played for 300 consecutive showings to packed houses. The audience were moved both by the story itself and the poetic language. In the late 60s the play was banned by the gang of four. Now that the gang has fallen its revival is another victory for Chairman Mao's policy of letting a hundred flowers bloom in literature and art.

Zhu Lin and Diao Guangtan.

Xinhua



HOME OF OVERSEAS CHINESE

Shantou or Swatow NEW BY ANY NAME

WU TONG

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I HAD KNOWN Shantou, called Swatow in the local dialect, more than 40 years ago in a time of war and turmoil. Already then it was a big commercial port in eastern Guangdong (Kwangtung) province; today it is the center of a prefecture consisting of the city and 11 neighboring counties. Unconsciously, as the plane circled down toward the airport, I began to look for familiar landmarks among the bays and clusters of buildings surrounded by neat squares of lush green fields. I found few. So changed for the better is Shantou prefecture that revisiting the places I had frequented there before, I found little that I remembered, except in the memories of others who had been there.

The day I arrived the S.S. Jin An bound for Malaysia and Singapore was scheduled to depart that afternoon. I went to the docks to watch. The passengers emerged from the lounge to board, and embarkation proceeded smoothly. From the ship they waved their goodbyes and someone called, "I'll be back soon!"

I recalled my own landing at this same port 40 years ago. In those days steamers could not berth at the pier; they had to heave to on the open sea. Even before our ship dropped anchor, swarms of little sampans converged upon it. Bamboo poles and iron hooks reached for the ship's rail and amidst a babel of yells and curses, a swarm of men scrambled up the poles onto the deck shouting the names of hotels, clutching at the passengers and slapping labels on their luggage. I, like many other passengers, shrank back in dismay, dodging the hooks, protecting my belongings and trying to keep my companions in sight. Finally we were carried off in a rocking little sampan and deposited on the rickety wooden pier.

Port of Embarkation

Shantou, situated at the confluence of the Hanjiang, Ronjiang and Lianjiang rivers in eastern Guangdong province, is endowed with an excellent natural harbor. It was opened as a trade port in 1855 when the weak Qing (Ching) dynasty government gave in to imperialist gunboat pressure. Long before that, however, and up to the time of liberation in 1949, Shantou and neighboring seaboard areas served as an exodus point for the destitute populations of villages bankrupted by feudal oppression and exploitation and imperialist aggression. From here for generations people from Meixian prefecture to the north, from southern Fujian (Fukien) province and from Shantou itself left China for south and southeast Asia, Japan and Africa, and some went to the Americas and Europe. No one has been able to furnish even approximate statistics on the number of emigrants from this region. Significant, however, is the fact that among the ten million population of Shantou prefecture one and a half million receive re-

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APRIL 1979

mittances from overseas, and almost every family has relatives abroad.

Harbor traffic before 1938 amounted to four or five thousand vessels a year. Passenger ships left daily for foreign destinations, particularly in southeast Asia. But this superficial prosperity brought no happiness to the population of eastern Guangdong, it only aggravated the misery. Shipping, harbor administration, customs, industry and commerce were all controlled by a handful of foreign companies. The port itself was a wretched affair: wharf equipment consisted of only a few gangplanks and barges; loading and unloading was done on human backs For lack of storage facilities, inand shoulders. coming goods were stacked in the city streets. Today things are different. Large storage depots and rows of warehouses line the waterfront, a forest of hoisting equipment rises from the docks and the work of enlarging the port is continually going on.

A walk from the dock area up the main street, once known as the Outer Road but now renamed Dongfanghong Avenue, brings one to the city's noisy, busy downtown district. This street links up with the newly-laid Shanzhang Road, a 30-meter-wide thoroughfare lined with a score or more of new factories, four middle schools, the Overseas Chinese Hotel and workers' housing projects. Municipal construction has considerably altered the appearance of the city since liberation. It is now more than twice its former size, and one and a half million square meters of new housing has gone up. Innumerable trees provide restful shade.

Shantou's Zhongshan (Sun Yat-sen) Park, reputedly the most charming of the many parks of the same name in China, draws crowds of holiday makers. Its famous artificial hill has been given a facelift. Between the trees that grow luxuriantly on the hillside — banyan, hemiptelea, holly, acacia one catches glimpses of arbors, pavilions and winding footpaths. Other attractions are the Bridge of Nine Curves that spans the emerald waters of a small lake, lovely lakeside pavilions and unique "gardens within gardens." Some of the liveliest and most popular spots are the new sports stadium, the children's playground, the museum and the lakeside teahouse.

Electronics and Chemicals

Be that as it may, what left the deepest impression on me was Shantou's industry. New construction has brought value of production to 16 times what it was at the time of liberation. Since China Reconstructs had carried an article on the workerturned-engineer Yao Jinzhong in its April 1978 issue, I made it a point to visit him at the Ultrasonic Research Institute. Now director of the institute and vice-head of the Shantou Ultrasonic Instruments Factory, Yao took time out from a technical conference with specialists from abroad to talk to me. From making ordinary ultrasonic flaw detectors and diagnostic instruments in the last few years they had gone on to produce complete sets of these instruments, some with multiple functions. These were now being widely used in armaments production, metallurgy, engineering, shipbuilding and the chemical industry. At the moment, Shantou's young electronics industry was working on new, high-performance products needed for the country's modernization, and the research institute and related factories were being expanded.

The Shantou Photographic Chemicals Plant is nationally famous. Started in 1953 with only two dozen workers, today it is a sizable plant with 2,700 men and women workers, manufacturing over 140 types of photographic paper and film for civilian, defense and scientific purposes. New workshops are being built in a six-hectare extension of the grounds.

Picturesque Chaozhou

An hour's drive from Shantou is Chaozhou, a 2,000-year-old town which was center of the Chaozhou prefecture of ancient times, and is now administrative seat of Chao'an county. One can still find many vestiges of old architecture about which local residents can tell you anecdotes and fascinating bits of history. But when I strolled through the town's main street — once known as Taiping Road — I could find nothing recognizable from the past. Gone are the stone-flagged roadway and the dozens of feudal memorial arches to some women's chastity,

Finishing touches to the finished products in the Shantou Drawnwork Factory.



which impeded traffic. Gone are the taverns with their singsong girls and the opium dens and gambling houses in the sordid alleyways. Instead there is a broad, straight asphalt road along which there was a busy open-air market. Farmers also came here to sell their home produce.

Chaozhou grew up where the Lingnan Mountains meet the Chaoshan plain. East of the city the Hanjiang River — largest in eastern Guangdong flows toward Shantou. The view of the city, rising on the rugged river bank against its background of rolling mountains, is reminiscent of the pavilions and terraces painted on Chinese screens. The best of the many places of scenic and historic interest are West Lake and Xiangzi Bridge.

It is said that a score or more scenic spots in China that bear the name West Lake, in addition to the largest world-famous one in Hangzhou (Hangchow), Zhejiang (Chekiang) province. Chaozhou's West Lake, more than a thousand years old, is situated in its northwest suburbs. With Mt. Hulu forming a backdrop for the clear blue lake, it is the perfect picture of charm and tranquility, whatever the season. The winding paths and red-pillared, greentiled pavilions have been repaired several times and new ones have been added. Hanbi Hall beside the lake, where Zhou Enlai once worked when he led troops through Chaozhou after the Nanchang Uprising in 1927, has also been restored after being destroyed during the Japanese invasion.

Bridge with a History

Xiangzi Bridge across the Hanjiang River is one of China's famous ancient bridges. Work was begun on it in 1170 during the Song (Sung) dynasty, although in the 57 years that followed only two pylons were laid because of war and unsettled conditions. Another 25 pylons were built between 1435 and 1506, during the Ming dynasty. But none could be laid in the center of the stream owing to the swift and turbulent current. The gap was spanned by a pontoon bridge resting on 18 barges until after liberation in 1949.

Many folk tales grew up around the difficulties in construction. One is that the bridge was built by the legendary figure Han Xiangzi to whom many exploits are attributed. He is said to have built the pylons by turning huge stones into sheep and driving them downstream to this spot. Between the years 1723 and 1735 a temple was erected on the bridge where sacrifices were made to a statue of Han Xiangzi. The span came to be known as Xiangzi Bridge.

In 1958 the local government with aid from the people dismantled the pontoon bridge and put in two enormous reinforced concrete pylons. In less than a year a 600-meter steel span 3 meters higher and resting on them was built with a concrete road seven meters wide instead of the previous four. A short distance south along the riverbank is the 40-meterhigh Fenghuang (Phoenix) pagoda built in 1586. From there a ferry takes visitors to Fenghuang



A new street in Shantou.



Ultrasonic flaw detectors being assembled in the Shantou Ultrasonic Instruments Factory.





Orchard and fields in Puning county.

A 1,529-meter sluice to block the sea water in Chaoyang county.



Aqueduct in Lufeng county.





Xiangzi Bridge in Chao'an county built in the 12th century.

Photos by Xie Jun



West Lake Park in Chao'an. Gu Jinyuan terrace in the center of the river. Standing on the terrace, as the current batters against its foundations flinging up sheaves of spray, one experiences a sense of exhilaration at the spectacle of the endlessly rushing waters, the mist-enveloped ancient bridge with the city beyond it seeming to float on the waves, the broad sweep of paddy fields on the right and the old pagoda thrusting up into the sky on the left. Cameras click as tourists take in as much as they can of the superb scenery.

Repairs are under way on the venerable Kai Yuan Temple, built 1,200 years ago in the Tang dynasty, whose preservation has been a cause for concern in recent years. Here I met Zhao Shen, over 70, who, I was told, is one of the few surviving people in the prefecture familiar with the craft of temple construction. When I arrived he was perched on the roof of the temple's main hall, carving a flying dragon to replace one which had been damaged. In the temple is an exhibition of 600 items unearthed in Shantou prefecture in recent years, from primitive society to 1840.

Famous Embroidery

Chaozhou is famous for its handicrafts of more than 20 different varieties, including the celebrated Chaozhou chinaware and embroideries. The city's chinaware industry, which dates back more than two thousand years, has considerably expanded. In addition to everyday chinaware, it produces about 70 kinds of porcelain *objets d'art*. In the factory I was particularly impressed by some 1.2-meter-high decorative vases with openwork and painted designs in beautiful colors.

Chaozhou embroideries rank with those of Suzhou (Soochow), Hunan and Sichuan (Szechuan) in the "famous four" of Chinese embroidery styles. They are characterized by their bas-relief effect achieved through stitches. Highly contrasting colors create a dazzling display. The Chao'an Embroidery Factory makes about 20 kinds of products, chiefly tapestries and embroidered borders, using such traditional motifs as peonies and phoenix, phoenix and the sun and birds paying homage to the phoenix.

Against Water and Sand

In mid-autumn when I was there the Chaoshan plain glowed golden-yellow in the sunshine. Heavy ears of rice augured a bounteous harvest.

The Chaoshan plain is the second largest in the province. Once fertile and productive, it was repeatedly hit by disasters of both natural and human origin before liberation. As the rural economy went bankrupt, the population suffered indescribable hardships. Destitute peasants sold their children to keep the family alive, families were broken up, many left their homes — it was that or starve.

Things took a radical turn for the better after liberation. Production rose year by year, and by 1965 this prefecture was the first in China to achieve a harvest of 1,000 jin per mu (7.5 tons per hectare).

How was the change brought about in this landscarce, densely-populated place with less than 1/30 hectare per capita? Water conservation works, reconstruction of farmland, higher dikes to keep out the sea and create more arable land, and reclamation of barren mountainsides were some of the things done by the hard-working farmers. Wherever feasible a diversified economy was followed, with industrial crops on the highlands and more multiple cropping, and all this accompanied by generally intensified cultivation.

I also visited Chaoyang, the most denselypopulated county in the area. As one gazes out over Haimen Bay at the southern tip of the mainland one can just make out an enormous sluice crossing the bay. Fifty kilometers around, this bay is the estuary of Chaoyang's principal waterway, the Lianjiang River, which flows through 17 of its communes, its chief grain-growers. From generation to generation the local population suffered the ravages of typhoons, tidal waves and salt water from the tides. Then in 1969 they built a 13-meter-high sluice across the bay to keep out the tides, keep in the fresh water and gain land from the sea. It took only nine months to build this 1,529-meter sluice and two sea walls totaling 16 km., and 91 km. of ditches and canals inside them.

This project solved the problem of tidal damage on more than 20,000 hectares along the Lianjiang, reclaimed 2,300 hectares from the sea and created or improved irrigation on another 12,000 hectares. But this did not end all the area's problems due to the low terrain, the river's large catchment area and the fact that 13 waterways from the Nanshan Mountains to the west converge and empty into the Lianjiang. Also, pressure from sea tides still often reversed the river's flow.

In 1975 the Nanshan Mountain diversion project was built in five months of intense labor. It involves a new 23-km. outlet to the sea dug east of the mountains and a 30-km. drainage system. Now 94 percent of the water rushing down from the Nanshan Mountains is diverted into the sea. More than 15,000 hectares of farmland benefit from the project.

Parts of the area often suffered from another kind of disaster — drifting sand. The small village which is home of the Hubian production brigade, for instance, once had 60 percent of its cultivable land buried that way. For this reason, at one time or another more than 600 villagers left to go to Thailand. After farming became collective in the years after liberation, the people attacked the sand. The village is now protected from the winds by a thick belt of trees on the beach, grown from a package of seeds Premier Zhou Enlai sent here in 1957. Work was done on other shelter belts and 1,200 dunes were removed by human labor freeing 30-some hectares more for farming. With all-round development of farming, forestry, animal husbandry, sideline production and fishing, the life of the villagers improved steadily. Grain allocation per capita has risen from 190 kilograms a year in 1965 to 250. Nine out of ten families have savings in the bank. Since 1969, 185 families have moved into roomy new homes. A typical family of five now lives in a tile-roofed house with four or five rooms and floorspace that totals 80 or 90 square meters.

Chaozhou Oranges Move Uphill

Chaozhou oranges are justly famous both in China and abroad for their fragrance, juiciness, lack of seeds and loose, easily-removed peel. At the Spring Festival Chinese living abroad consider it auspicious to have Chaozhou oranges from their homeland. Puning county, which has been cultivating oranges for 300 years is their main producer. In the luxuriant groves that climb the hills the oranges glow like balls of gold. The Tuyang brigade of the Meitang People's Commune has been successfully growing them on the stony hillsides and, viewed as the coming thing, their methods have been introduced throughout the county. Now Puning has 1,000 hectares of hill-slope orange groves. The Tuyang brigade harvests roughly 250 tons from 30 hillside hectares, which means a 250,000-yuan addition to their income.

One cannot leave a description of the Shantou area without the story of the Linhuishan brigade in Puning county. Since 1971 this densely-populated, land-poor $(0.4 \ mu \ per \ person)$ brigade has become

well-known for the way it has expanded its small industries and sidelines — a total of 39 kinds. One of these is production of Shantou drawnwork. What used to be an individual or family occupation is now undergoing transition from partial to full collectivization. In the Shantou area as a whole there are more than 1,000 workshops with a million women employed in them.

The Linhuishan brigade also has tiers of pineapple terraces, as well as orange and plum orchards and fir groves. Not so long ago these were the subject of a bitter controversy. Adherents of Lin Biao and the gang of four in the prefecture government insisted that the Linhuishan brigade was "putting cash in the lead," thus taking the capitalist road. They demanded that its small industries and sideline production be stopped and workers from these be put to farming. All land was to be given over to grain crops. The brigade members were unanimous in the opinion that it would be a crime to destroy the orchards. Many people still remembered how orchards had been cut down and forests burned when before liberation the area had suffered 27 kill-and-burn raids by Kuomintang troops.

With the backing of its members and at personal risk, the brigade leaders decided to disobey these arbitrary and preposterous orders from above. They not only preserved the industry and sidelines, they even "secretly" expanded these. Land under pineapples was increased from 10 to 23 hectares, and to the original 20 types of sidelines, 19 more were added. Eighty hectares were planted to oranges,

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Photos by Xie Jun



In the Fengxi Ceramics Factory in Chaozhou.



Recalling Some 'Good Americans'

Chairman Mao Zedong with Edgar Snow (left) and Rewi Alley (right) at a dinner party in October 1960.

C ONSIDERING all that has happened since the end of World War II, the normalization of relations between a liberated China and the United States of America is an event of world-shaking importance. The China that now meets its neighbor across the Pacific is not the old beggar China, a land of famine, warlords, opium and landlordism, but a mighty resurgent land that has passed through 30 years of self-reliance and now stands sturdily on its own feet, able to meet other countries on equal terms and make any arrangements necessary in its continuing struggle for modernization.

Not long ago the people of China, who know only too well what war means, welcomed the peace treaty with Japan, for the two countries can do much to help each other. It was an additional cause for their satisfaction when the new China-U.S. agreement was announced. The accord was one for which a host of good Americans had struggled a number of decades.

Many Chinese have had close relations with American friends who made China's cause their own. I think of the two young Americans, Edgar Snow and George Hatem — Ma Haide — wandering through the loess hills of the northwest after being put on course by Liu Ting, the 1936 Communist Party representative in Xi'an (Sian). Ed was to go and

REWI ALLEY

bring the Red Army as a principled force before the people of the world, Ma was to take part in medical work. Ma went with the force to Gansu (Kansu) to meet the remaining armies of the Long March and tramp with them to Yanan. He has stayed with the Chinese people these 40 years.

I think too of Evans Carlson who, after a tour of duty with the Eighth Route Army in early days (1937-38) of the War of Resistance against Japan, made that army his model for the future. I think also of Ida Pruitt, China born and China reared, 90 years old last year, who went off to the U.S.A. to start working for financial assistance to the Gong He movement to set up small cooperative industries throughout unoccupied China. In doing so Ida created great interest among prominent people in the U.S.A., and this in turn influenced officials in Wuhan and Chongqing who had felt that China had no friends anywhere and that submission to Japan was the only way out. Many good Americans helped Gong He in various parts of the country all through those tough years.

Then one thinks back on the early days of the revolution when Agnes Smedley, Anna Louise Strong, Helen Foster Snow (Nym Wales) and others wrote so strongly and so effectively in China's support. The ashes of Anna Louise and Agnes lie



(Above) Anna Louise Strong and Ma Haide (Dr. George Hatem) in Guangdong, 1967. (Above right) Commanderin-Chief Zhu De with Agnes Smedley in Yanan, 1937. (Right) Vice-Chairman Zhou Enlai chats with a group of American friends during the anti-Japanese war days in Yanan, including John Service (left), then a diplomat in the U.S. Embassy to China.

along with those of other revolutionaries at Ba Bao Shan in Beijing (Peking). Joe Stilwell, the general who did his best for China, is still warmly remembered, while the good Americans who understood what was going on in China but who were later persecuted in witch-hunts, have lived on to see a new China emerge. Their doyen was Jack Service, whose spare, erect figure may still be seen at times when he revisits China, as he often does, walking among the people of Wangfujing Street constantly fascinated by the faces he sees around him.

There are the grand women Maud Russell and Talitha Gerlach, who came to China with the YWCA but ended up giving a lifetime of service to the Chinese people, service that continues unabated today, though both are well into their eighties.

There were so many others. It was an old American ex-missionary, Joseph Bailie, who spent his time sending off young Chinese for technical training abroad, who advised me to use my summer holiday to work for famine relief in Salachi, Nei Monggol (Inner Mongolia). When I went there I found the old American Dr. Ingram of Beijing himself steaming the winter clothing of refugees working on a canal to get them free of lice, as there was so



Helen Foster Snow



much typhus around. There were some 40,000 of these people on the job. In the summer they sensibly liked working with nothing on, free of lice bites. Ingram must have saved a good many with his delousing scheme.

In Hankou when I went to be Relief Commission representative in building the dikes after the 1931 flood, an American stalwart, Bishop Logan Roots, gave immense support. In 1938 at his house, where he was often visited by Premier Zhou Enlai, I met Agnes Smedley again. But when one starts to think of Americans who helped, so many names come up. Not a few of them stayed warm and friendly all through the bad years when to be a friend of China was to be something strange and suspicious.

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The Peace Rose

ZHANG XUELING



Vice-Chairman Deng Yingchao presents one of the roses to a member of the Delegation of the Former U.S. Army Observers Group during their revisit to China in May 1978. Xinhua

 A^{S} people in China celebrated the normalization of relations between the United States and China I recalled the story of the Peace Rose.

The Peace Rose was developed in France during World War II. Larger than most roses, when it first blooms it is pale yellow and then grows darker until it turns pink. To protect his creation from the invading Nazis, the horticulturist sent bushes out to several countries. In each it was given a different name. After the end of the war the rose won fame in international flower shows and finally acquired the name Peace Rose. In a way, its very birth represented the people's eternal opposition to fascism and their desire for peace and friendship.

One day in May 1978, as spring filled the air in Beijing (Peking), a room in the Great Hall of the People echoed with laughter and conversation. Chinese leaders Ye Jianying, Nie Rongzhen, Deng Yingchao and Kang Keqing were receiving a delegation of the former U.S. Army Observers Group which had been stationed in Yanan during the war against Japan. It was a happy meeting of old friends. In a glass on the table stood a beautiful rose, pale yellow in color and surrounded by delicate green leaves, its lovely image reflected in the glass tabletop.

"You have the Peace Rose in China too?" one of the Americans asked in surprise.

Deng Yingchao, the wife of former premier Zhou Enlai, had brought the rose and now she told how it had come to China.

 $T^{\rm HE}$ story began during World War II when the Chinese and American people were allies against the Japanese imperialists. In the winter of 1944, while

ZHANG XUELING is a staff member of the Chinese People's Association for Friendship with Foreign Countries. on a mission against the Japanese invaders in northeast China, an American B-29 bomber was hit by anti-aircraft fire. The plane crashed near Shanhaiguan where the Great Wall comes down to the Bohai Gulf. The pilot, Oliver Hinsdell, and six of his crew parachuted onto a nearby beach. They were 600 miles behind enemy lines.

Hinsdell's commanding officer had told him, "Head for the hills and look for Communist guerrillas if you get into trouble," for Mao Zedong's armies were fighting the Japanese in north China. The seven men set off for the mountains in the distance, and soon met a peasant who took them to the village near Shanhaiguan, a small island of resistance in the Japanese-controlled territory. There news of their rescue was radioed to Communist headquarters in Yanan. Back came the answer: "Bring these men through the lines to Yanan."

So the seven Americans began a 1,500-mile trek that was to take them six months of hard walking, making most of their way along steep mountain trails, through Japanese blockades and patrols. All kinds of people acted as their guides. Some were men of the Eighth Route Army, some were villagers, once it was a twelve-year-old boy. Along the way the Americans met many ordinary Chinese civilians and began to realize what a people's army was. Though the people had barely enough for themselves, they provided the Americans with food, clothing and warm places to sleep in. The fliers saw how strictly the Communist army kept to its discipline, taking nothing from the people, sharing the good and the bad with them and in turn being loved and supported by them. In these mountains of north China Hinsdell and his men saw the true strength of the Chinese people that later was to bring them victory.

At last they reached Yanan. In a cave room Chairman Mao gave a dinner in honor of the rescued Americans and they drank toasts to the victory of



the Allies. The men met other leaders and became friends with the local people. Understanding grew and a deep friendship was forged. They remained in Yanan until the Japanese surrender.

IN SPITE OF the bleak outlook for Sino-American friendship during the years that followed, Hinsdell never forgot his Chinese friends and dreamed of returning to China and thanking those who had done so much for him. Unfortunately he died before his wish could come true. In 1972 the Sino-American Shanghai Communique was signed. Hinsdell's wife, Amalia, decided that the time had come to carry out her husband's wish. In 1973 she and her daughter visited China and told of Hinsdell's dream and his happy memories of the Chinese people.

Mrs. Hinsdell brought with her two Peace Rose bushes from her California garden as an expression of the friendship she and her husband felt for the Chinese people. All the way, struggling on and off planes, she and her daughter carefully carried the bulky box with them, at each hotel managing to keep it cool and moist so the roses would survive the trip. Thus the American Peace Roses arrived safely in China. One was presented to Chairman Mao and the other to Premier Zhou Enlai.

"We planted it in our garden and took special care of it," Deng Yingchao continued. "The bush has flowered many times since then. Today I brought a perfect one to give to you, my good friends. It is a flower of the friendship between our two peoples. Like the color of this rose, I hope this friendship will deepen with the years and continue from generation to generation."

(Above) The seven shot-down American fliers (Oliver Hinsdell among them) pictured in Yanan receiving heroes' badges from Chinese women in winter, 1945. The inscription at the top was written at the time. Chairman Mao Zedong, Vice-Chairman Zhou Enlai. Commander-in-Chief Zhu De and Chief of Staff General Ye Jianying with John Emerson, member of the Observers Group in Yanan. October 1944. (Right) Some members of the delegation at the Yanan airport.

Fang Xiaoguang



Changshu Arts and Handicrafts

BIAN HUI

 $\mathbf{D}^{\mathrm{ENSELY}\mathrm{-}\mathrm{POPULATED}}$ Changshu county in Jiangsu (Kiangsu) province south of the Changjiang (Yangtze) River has been long known for its traditional art and handicrafts.

Changshu art work is of many kinds. Early in the Yuan dynasty (1271-1368) painting, carving and weaving from this area were popular. In the Ming (1368-1644) and the Qing (1644-1911) dynasties these developed further.

Traditional Painting

Chinese traditional style painting in Changshu is outstanding. In the exhibit room of the Changshu Art Center there are landscapes, figures and scenes of today's life, as well as copies of ancient paintings so well done they are hard to distinguish from the originals.

BIAN HUI is a staff reporter for China Reconstructs.

Peasant women doing lace work in boats. Chen Yingpei

Changshu became a county in the Liang dynasty (502-557). Its historical annals have recorded many great painters and calligraphers. Huang Gongwang of the Yuan dynasty, Zhou Zhiyuan of the Ming dynasty, Wang Shigu and Wu Yushan of the Qing dynasty were all master artists. Chinese traditional painting was divided into north and south schools, the former's main characteristic being strength and the latter grace. Wang Shigu combined the emphases of the two schools and developed the Yushan style (so named from Mount Yushan in the county). Gradually Changshu became a noted center of Chinese traditional painting.

After liberation the government organized the artists of Changshu into cooperative groups. These later became the Changshu Art Center where today 200 workers either paint or mount paintings.

The center produces paintings on paper and silk of many sizes and kinds. A few years ago it began making double-faced silk paintings which could be viewed from either side. At the Guangzhou (Canton) Fair works such as "Gathering Medicinal Herbs in the Deep Mountains," "The Great Wall," "Eagles in Flight," "Spring Comes to the Lijiang River" were highly appreciated.

Chinese traditional painting in Changshu also has a basis among the people, for almost every commune in the county has peasant artists — about 500 altogether. Most of them do work for the Changshu Art Center during slack seasons or in their spare time. Many attend painting classes at the center.

Changshu Lace

Making lace is so common in Changshu that women are often seen doing it in the fields, at home, on buses, even in boats. Changshu lace has been known inside and outside China for a half-century.

Zhu Yongqing

A studio of the Changshu Art Center.



Using the techniques of embroidery, lockstitch, crochet and drawn work, the artists make tablecloths, quilt covers, pillow cases, bedspreads, window curtains, handkerchiefs, sofa covers and other articles from linen, cotton, dacron or vinylon.

Changshu has a lace factory which began as a handicraft cooperative. Expanded several times, it now has 500 workers. Cleaning, drying and cutting have been semi-mechanized. Making a product involves designing, enlarging patterns, printing, joining, embroidering, bleaching and ironing. Joining and embroidering require much hand work and this is given to peasant women to do at home. Thirty communes in the county have lace cooperatives -60 of them with 150,000 women workers.

The lace factory trains new workers. Teachers in its large embroidery classes are veteran workers.

The factory produces 20 times more than all the lace made in Changshu at liberation. There are 260 kinds. Workers at the factory have invented 60 different stitches. They did the drapes for the Chairman Mao Memorial Hall in Beijing (Peking) with a new technique of mounting embroidered flowers, in this case pine trees, on crochet work. Bedspreads made with the same method are very popular. The factory also makes products by doing applique on crochet work and makes designs on dacron by chemical means. Its lace-work is used by the Changshu Garment Factory No. 1 to decorate clothing items. It has now 55 ways of doing embroidery on articles. Since 1970 it has designed 760 dress patterns.

Changshu Carving

Changshu carvers were already highly skilled in ancient times. In a Ming dynasty article, "A Carved Boat," a writer named Wei Xueyi praised the unique workmanship of Wang Shuyuan, a Changshu craftsman. Wang carved a boat from a walnut shell, de-

Young people being trained in traditional wood carving. Zhu Yongqing

picting Su Shi (1037-1101) boating at Chibi with his friends and servants. The window of the boat could be opened and closed. "What exquisite skill!" Wei commented.

Today the traditional techniques have been improved. In the Changshu Furniture Factory is a set of 18 pieces of mahogany furniture called "One Hundred Lions." The table alone has 99 carved lions in different shapes and forms on its edges. The factory produces a kang (brick bed) table with carved flying dragons which is so well constructed that once when one fell from a crane, the packing crate was smashed and the table somewhat damaged, but its tenon and mortise joints held firm. The factory has exported 1,000 such tables, and still cannot meet the demand. Its pieces of mahogany furniture are considered precious works of art.

Changshu makes skillfully crafted silver and gold jewelry, also traditional in the county. Most of this is done in the Changshu Metal Handicraft Factory.

The factory exhibits a vigorous and charming gold lion, a copy of one unearthed from a Han dynasty (206 B.C.-A.D. 220) tomb. Ten inches long and six inches high, it is made of 14 karat gold sheets and inlaid with 176 pieces of turquoise and eight gems. The factory also makes a miniature landscape of gold, coral, jadeite and pearl; necklaces embedded with jadeite and pearls; pendants; rings and earrings.

Changshu's handicraft production is increasing. Last year its total export value was 11 times that at liberation and triple the figure for 1966. Its products are sold in 86 countries. The county now has a dozen handicraft factories with 2,600 workers - plus peasants, who work at home, numbering more than 150,000. By giving work to the peasants the factories have spurred sideline production in the communes and increased the income of their members. In 1978 they paid the peasant workers an average of about 50 yuan per family in the county.

A veteran artist making a piece in gold.



Zhu Yongqing





Double-sided bird-and-flower painting on silk.



Gold parrot with gems, contemporary.



Part of the sculpture "One Hundred Lions."



"Beauties in a Park," painting in ancient style.

Poems and paintings in Yushan style depict the four seasons on a screen.



Gold lion inlaid with gems, copy of one from a Han dynasty tomb.



The Historical Play 'Cai Wenji'



Chieftain Zuo Xian (center) presents Dong Si (left) to Cai Wenji.



A farewell dinner given for Cai Wenji, Dong Si and Zhou Jin by the Southern Xiongnu king.



Cai Wenji compiles the history of the Han dynasty after her return to the Han court.

Cao Cao officiates at the wedding of Cai Wenji and Dong Si after she has been reunited with her children. *Photos by*^e *Zhang Shuicheng*



CULTURAL NOTES

Drama on a Talented Woman

'CAI WENJI' BY GUO MORUO

THE historical play Cai Wenji in five acts by the late writer Guo Moruo (Kuo Mo-jo) has recently been restaged by the Beijing People's Art Theater and enthusiastically acclaimed. It has been televised several times and is being filmed.

Cai Wenji was an outstanding woman who lived near the end of the Eastern Han dynasty (A.D. 25-220). The daughter of Cai Yong, a famous writer and musician, she was well-educated, a skilled musician and a talented poetess. While she was still a young woman her father was killed in the struggle for power at the end of the Eastern Han dynasty and her husband died soon afterward. When the fighting reached her home place, she fled and was captured by the Southern Xiongnu (Huns) and taken to their home in what is now southwestern Nei Monggol (Inner Mongolia). There she was given in marriage to the Zuoxian chieftain, a Xiongnu, and bore him two children. But all the time she thought of her homeland and her late father.

In the play Cai Wenji is able to return home as a result of the diplomacy of General Cao Cao (Tsao Tsao), Prime Minister to the last Han dynasty emperor, and an old friend of her father's. Cai Wenji's father had been compiling a history of the Han dynasty and this work was left unfinished at his death. It is A.D. 208. Cao Cao sends two envoys, Dong Si and Zhou Jin, to the Southern Xiongnu urging them to allow her to return to continue her father's work. Zhou Jin tries to sabotage the trip by his attitude toward the Zuoxian and even Cai Wenji is hesitant about him. But Dong Si explains Cao Cao's purpose, and his sincere desire to create friendly relations with the Xiongnu wins the Zuoxian over. He vows to be a friend to the Han dynasty forever, and, though sad, allows his wife to go back to her own land, but without her children.

On the way home, longing for them, she expresses her sadness and the story of her homesickness while

(Continued on P. 13)

Cai Wenji (acted by Zhu Lin) Gao Cao (acted by Diao Guangtan) The Zuoxian chieftain (acted by Zhu Xu) Dong Si (acted by Lan Tianye) Cai Wenji's son and daughter (acted by Chen Hao and Shang Mengchu)

Photos by Zhang Shuicheng





Record of a Fighting Life

—Exhibition on Zhou Enlai

SU DONGHAI

A popular photo of Zhou with Mao Zedong, 1953.

V ISITORS to the exhibition on Zhou Enlai's (Chou En-lai's) life now on display in the Museum of the Chinese Revolution are greeted by a huge oil painting as they enter the section on the socialist period, devoted to his activities after liberation in 1949. It shows Chairman Mao on the Tian An Men rostrum proclaiming the establishment of the republic. With him are Zhou Enlai, Zhu De (Chu Teh), Soong Ching Ling (Mme. Sun Yat-sen), Zhang Lan, Li Jishen, Guo Moruo and other leaders. Beneath the painting on a piece of red velvet is a replica of the copper seal which Zhou used as Premier of the State Council from that time until his death 27 years later.

The exhibition contains many items from the campaigns of the first ten years after liberation in which Premier Zhou worked closely with Chairman Mao to consolidate the political power of the proletariat and develop the economy: land reform, the movement for the suppression of counter-revolutionaries, against the "three evils"* and the "five evils"** in 1951-52, and socialist transformation of agriculture, handicrafts and capitalist industry and commerce.

One photo shows Zhou striding at the head of a line of cadres holding up a banner reading "Office Workers' Team No. 4" when he went to work as an ordinary laborer on the Ming Tombs Reservoir north of Beijing (Peking). In another he is shown pulling a cart of rocks by a rope over his shoulder with a long end of the rope dangling down. About this there is a tale: Those pushing the cart from behind had purposely attached a long rope to make the load lighter for him and so that he would not be hit if rocks tumbled off the cart, but, knowing this, Zhou pulled with the rope short anyway.

D URING the three years of temporary economic difficulties (1959-61) Zhou carried out numerous investigations in person. He initiated an economic program aimed to "readjust, consolidate, fill out and raise levels" and organized the people to rapidly make up for losses and develop industrial and agricultural production. He is shown on one such investigation in a factory talking with workers as he shares their meal of steamed cornmeal buns. Wherever he went he always tried to be one with the people.

^{*} The "three evils" were corruption, waste and bureaucracy. ** The "five evils" were bribery of government workers, tax evasion, theft of state property, cheating on government contracts and stealing economic information from government sources for private speculation.


A worker at a Hebei province textile mill shares a cornmeal bun with Zhou on an inspection tour, 1961. With Vice-Premier He Long (standing, center) inspecting a People's Liberation Army unit, 1964. Zhou's efforts in building up the People's Liberation Army are revealed by many photos and other items. In one he is examining a tank for the effects of anti-tank weapons. In another, he is aboard a naval ship watching a sea maneuver. Others show him listening intently to a report on a mock air battle, observing the shooting of guided missiles in a militia base and at other activities.

Zhou was resolute in carrying out Chairman Mao's policy for minority nationalities and in developing the revolutionary united front by uniting with all forces that could be united with for building socialism. The photos in this section are especially appealing. There is Zhou in Dai (Tai) nationality costume merrily splashing water with the Dai people at their traditional festival. There he is with his wife Deng Yingchao walking hand in hand with children of overseas Chinese on a returned overseas Chinese farm on southerly Hainan Island. In another, he is shown at a celebration of the 25th anniversary of the China Welfare Institute in June 1963 with Soong Ching Ling, chairman of the institute, Zhu De, Dong Biwu, (Tung Pi-wu), He Xiangning (Ho Hsiang-ning), Chen Yi, Nie Rongzhen, Deng Yingchao and Kang Keqing.

ZHOU gave much attention to the development of science and technology in China and was in the forefront in implementing Chairman Mao's policy for intellectuals. He is shown in one photo chatting with geologist Li Siguang (Li Ssu-kuang) and physicist Qian Xuesen (Chien Hsueh-sen). There is also a letter he wrote in September 1972 to scientists Zhang Wenyu and Zhu Guangya in which he pointed out, "The Academy of Sciences must pay attention to the basic sciences and the study of theory and at the same time integrate the study of theory with scientific experimentation." This was in repudiation of the ideas promoted by the gang of four who had abolished the study of the basic sciences and sabotaged research work in the places they controlled.

Firmly holding to the idea that education should help people to develop morally, intellectually and physically so as to become workers with both socialist consciousness and culture, he made personal investigations and gave concrete directives on the length of schooling, enrollment and scientific research by faculty members. On exhibit is a letter to Tianjin Middle School No. 14 (formerly known as Nankai Middle School in Tianjin where Zhou had studied as a boy) in which he explicitly expressed his views on education. Other directives and mottoes in his calligraphy on exhibit embody this spirit and show how he struggled against the gang of four's views on education.

Many items on display reflect his concern for activities in many other fields including literature and art, physical education and medical work. One is a letter written to Cheng Yanqiu, the popular Beijing opera actor on the occasion of his being accepted as a member of the Communist Party in which Premier Zhou expressed his hopes for the actor and the demands he should make on himself. Cheng had been recommended for Party membership by Zhou himself.

One sees the football which Zhou used in keeping fit. In 1965 he presented it to the child of one of his assistants and urged him to "steel yourself from young." On the ball are characters in the child's writing, "A Football Used by Grandpa Zhou."

H IS outstanding work in foreign affairs is reflected in many photos, documents and other items his devotion to the principles of proletarian internationalism, and his work in promoting the international communist movement and strengthening the unity between China and other peoples, especially peoples of the third world, to forge a broad international united front against hegemony.

In April 1955 Zhou, representing China, attended the Bandung Conference where he was instrumental in drawing up the five principles for peaceful coexistence. He is shown speaking at the meeting and signing autographs. There are also photos of his diplomatic missions to dozens of countries in Asia, Africa and Europe. One big photo shows him being met by Chairman Mao at the airport on his return from the 22nd Congress of the Communist Party of the Soviet Union in 1961. Zhou had exposed and criticized Khrushchov's splitting of the international communist movement and had walked out of the congress. Other photos include Premier Zhou welcoming U.S. President Nixon at the airport in February 1972 in the process of building normal relations between China and the U.S., and signing the Joint Statement of China and Japan on September 29, 1972 with Japanese Prime Minister Tanaka, which led to reestablishment of diplomatic relations between China and Japan.

D URING the cultural revolution Zhou Enlai waged a resolute struggle to defend the policies of the Communist Party against the intrigues of Lin Biao and the gang of four. Directives written by him on documents on display give some idea of what a bulwark of strength he was for the people to turn to.

One huge photo shows Premier Zhou, representing the Communist Party, giving the work report at the Fourth National People's Congress in January 1975, when he was already seriously ill. Below the photo in gold letters are some of his words from the report: ". . . accomplish the comprehensive modernization of agriculture, industry, national defense and science and technology before the end of the century."

During 1975, even after confined to a hospital. room, Zhou continued to work for the Party and government. The shaky handwriting reveals what an effort it was to work on the multifarious docuZhou Enlai with children on a farm of returned overseas Chinese on southerly Hainan Island, February 1960. With Li Fuchun, Nie Rongzhen and Guo Moruo receives scientists at the national conference to plan scientific work, 1956. (Opposite) With friends from Asia, Africa and Latin America.



ments and directives that came his way. We see one report about opening up a new civil airline on which he penciled a directive of over 300 characters and asked for a report-back on its implementation. We also see an urgent report from the Xinhua News Agency on which he worked late into the night to write a directive, and the copy of the directive which had been sent to Yao Wenyuan, one of the gang of four then in charge of propaganda work, with a secretary's notation: "Yao Wenyuan has already gone to bed and won't look at this."

A rather new-looking pair of cloth shoes constitutes one exhibit. This is their story: In April 1975 Zhou Enlai had insisted on getting up to receive Chairman Kim Il Sung of the Democratic People's Republic of Korea, but his feet were swollen too much to put on his usual pair of leather shoes. His assistants had a pair of cloth shoes made with an especially large opening at the top which he wore for the occasion and to meet his last few guests.

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T HE last section of the exhibit concerns the death of Premier Zhou on January 8, 1976 and commemorative activities. Some of the items are symbolic of the people's conception of him: the one and only Chairman Mao badge he had worn since the cultural revolution, with the words "Serve the People" on it; on the wall the words and music of the *Internationale*, the song he loved and which he had asked his wife Deng Yingchao to sing with him in his last moments, the song which the people sang many times in the period following his death till it became intimately associated with his memory.

There is a huge photo of the Premier lying in state surrounded by flowers, and photos of national leaders and people from all walks of life and the minority nationalities paying their last respects. Also telegrams of condolence from governments, organizations and individuals the world over. Among the items is a replica of the wreath of fresh flowers from Deng Yingchao with the inscription on a ribbon in her calligraphy, "In memory of my comrade-inarms, Enlai, from Xiao Chao in grief."

One whole wall is given over to a painting of China's vast landscape, the mountains and rivers over which Zhou had asked his ashes be scattered. There are also poems written by ordinary people commemorating the Premier. One reads: "His ashes scattered over our land, the monument to him in the hearts of the people." Photos show crowds lined up for miles along Changan Boulevard in freezing temperatures in tribute as his hearse passed by, and the hundreds of thousands filling Tian An Men Square, with the tiny white flowers of mourning left by them covering the pines and bushes and the Monument to the People's Heroes surrounded by wreaths.

PREMIER ZHOU'S office as it had been with all the actual articles has been reassembled in the exhibit. There is his desk piled with papers — the many documents he had to wade through every day and comment on and a large number of sharpened pencils in two pencil holders on his desk. These are merely two ordinary glasses, one even cracked and held together by a piece of adhesive tape for Zhou forbade spending government money on anything not essential — as long as a thing could still be used, that was enough for him. In the room is only one easy chair, and, because Zhou had always refused such things, there had not been that until Chairman Mao insisted on presenting it to him during his illness.

On the door of the office is the big-character poster which had hung there for a while during the early days of the cultural revolution. In it his staff demanded that he take better care of his health and try to rest more. Many leading members of the Party Central Committee added their signatures to it, including Deng Yingchao, who appended several concrete suggestions. On the poster Zhou had written, "I sincerely accept these suggestions. Will have to see how it works out in practice." Actually, he continued to work as before.

There is a tiny box of Chinese ointment for headaches which he often rubbed on his forehead when he became very tired but wanted to continue work and the slanting table he used to write on while in bed. In 1960 he had obtained some plywood boards which he used for the purpose, one in the bedroom, some in other rooms where there were no tables. He hardly ever went to sleep at night without sitting in bed and making notations on documents, so finally Deng Yingchao designed the bedtable.

The exhibit ends with a huge painting showing the people of China, led by the Party Central Committee headed by Chairman Hua, forging ahead after smashing the gang of four, to achieve the four modernizations and turning the hopes of their beloved Premier into revolutionary action.

At work on the Ming Tombs Reservoir, June 1958.



ECONOMIC BRIEFS

Capital Construction in 1978

C HINA'S capital construction in 1978 was more than in any other year since liberation. The investment involved was 40 times that of 1950. Of 1,000 major projects begun, 300 were completed. These were of key importance in China's present drive to modernize. Below are some of them (see the map):

Iron and Steel. China turned out 31.7 million tons of steel in 1978. The first stage of the Panzhihua Iron and Steel Complex in Sichuan (Szechuan) province went into production. A big iron mine, opened in the same area, produced 3.5 million tons of ore. The Wuhan Iron and Steel Company in Hubei (Hupeh) province completed a new rolling mill capable of turning out 3 million tons of steel sheets up to 1.7 meters in width annually. Three small iron and steel works in Hangzhou (Hangchow). Zhejiang (Chekiang) province, made four 24-squaremeter machines that increased sintering capacity by one million tons. Both the Anshan Iron and Steel Complex in Liaoning province and the Taiyuan Iron and Steel Company in Shanxi (Shansi) province built 65-hole coking ovens. The country as a whole raised its coking capacity by more than a million tons. Construction started on the Baoshan Iron and Steel Complex in Shanghai, purchased from Japan. It will produce 12 million tons of iron and steel annually.

Power. Last year China increased her generating capacity by an amount almost three times her entire electrical output in 1949. Generators producing 320,000 kw. were built at the Beidagang Power Plant in Tianjin (Tientsin) and 250,000 kw. at the Douhe Power Plant in Tangshan, Hebei (Hopei) province. Generators putting out 100,000 kw., 200,000 kw. and 125,000 kw. went into service at the Fengtan Hydroelectric Power Station in Hunan province, the Qingshan Power Plant and the Jingmen Power Plant in Hubei province respectively. Work began on a new hydroelectric station in Wanan, Jiangxi (Kiangsi) province.

Oil. China's oil production continued upward on an accelerating curve. Output of crude went up 11.1 percent. The new oil field in Renqiu, Hebei province,

again expanded its productive capacity. In Zhenhai county, Zhejiang province, a refinery processing 2.5 million tons of crude oil a year began production. The Xinjiang (Sinkiang) Petrochemical Works put three new sets of refinery equipment into trialproduction in Urumqi. A petrochemical plant in Wuhan began operation. Oil pipelines from Cangzhou in Hebei province to Linyi in Shandong (Shantung) province, from Dongying in Shandong to Linyi and from Linyi to Nanjing (Nanking) in Jiangsu (Kiangsu) province, were laid.

Fertilizer and Chemical Fibers. Four chemical fertilizer plants were completed last year: a natural gas chemical works at Chishui in Guizhou (Kweichow) province, a petrochemical works in Guangzhou (Canton), a chemical fertilizer plant in Nanjing, and a petrochemical works in Anqing, Anhui (Anhwei) province. At the new Shanghai Petrochemical Complex where three production lines were already in use in 1977, construction was accelerated. A vinylon factory at Changshou in Sichuan province and a general petrochemical fiber plant at Liaoyang in Liaoning province were finished.

Coal. China mined 600 million tons in 1978. Many new shafts were opened, a dozen of them of large or medium size producing 450,000 to 1.2 million tons a year. These increased China's coal mining capacity by over 10 million tons. A coal-dressing plant was built in Housuo, Yunnan province. A new 4,000-square-kilometer coal base being opened at Yanzhou in Shandong and a mine at Yongan in Fujian (Fukien) province progressed with high speed.

Railways. In 1978 China overfulfilled her plan for new construction and bringing her nine main lines up to standard. Forty percent more track was laid than in 1977. Of the first section of the Qinghai-Xizang (Chinghai-Tibet) railroad from Xining to Golmud, 651 kilometers were put down. Also completed were two-thirds of the 474-km. line from Turpan to Korla in south Xinjiang, the new 894-km. line from Xiangfan in Hubei province to Chongqing (Chungking) in Sichuan province, and the 885-km. Zhicheng-Liuzhou line between Hubei province and Guangxi Zhuang (Kwangsi Chuang) Autonomous Region.

Water Projects. Irrigated areas increased by 1.4 million hectares. The Huanghe (Yellow) River water regulating system in Henan (Honan) province (10,000 cubic meters per second) went into service. Construction on the Fengjiashan reservoir in Shaanxi (Shensi) province and the Panjiakou reservoir in Hebei province was speeded up. The building of the Gezhouba water conservation project on the Changjiang (Yangtze) River in Hubei province and the Longyangxia hydroelectric power station on the Huanghe River in Qinghai province went more rapidly.

Light Industry. Some 20 sugar refineries were built in Wengyuan, Guangdong (Kwangtung) province; Yanglan, Hainan Island; Anda and Zhaoyuan, Heilongjiang (Heilungkiang) province; and

Capital Construction Projects (1978)

by Yang Zaosan





other places. New camera factories went into production in Beijing (Peking) and Shanghai, making several hundred thousand cameras a year. The Nanping Paper Mill in Fujian province was expanded.

Housing. Floor space built in 1978 in the cities far surpassed 28 million square meters, the amount built in 1977. Beijing erected 30,000 apartments totaling 1.62 million square meters. Tianjin, Shanghai, Harbin, Wuhan and many other cities also speeded up housing construction. Chengdu, Changsha, Lanzhou and other cities built new water supply systems, providing a total of 1.2 million tons of water per day. **Construction in Minority Nationality Areas.** In Xizang (Tibet) a geothermal power station entered the second stage of its construction and began a 110,000-volt transmission line from Yangbajain to Lhasa. The No. 1 Agricultural Machinery Plant and the Manas Cascade Hydroelectric Power Station in Xinjiang were completed. Auxiliary projects in the Huanghe River irrigated areas in Nei Monggol (Inner Mongolia) were finished. The Qingtong Gorge water conservation project in Ningxia (Ningsia) began operating for 171,000 hectares of land. A woolen tops mill and an oil refinery in Yinchuan also began construction. A nitrogen fertilizer plant at Hechi in Guangxi was built.

New Spelling of Chinese Place Names NAMES of well-known places in China are listed as follows. The old spelling in the Wade system is in brackets. Municipalities directly under the central authorities: Beijing (Peking) Shanghai (Shanghai) Tianjin (Tientsin) Provinces, autonomous regions for minority nationalities and some well-known cities and other places: Anhui (Anhwei) Province Hefei (Hofei) Bengbu (Pengpu) Fujian (Fukien) Province Fuzhou (Foochow) Xiamen (Amoy) Gansu (Kansu) Province Lanzhoù (Lanchow) Guangdong (Kwangtung) Province Guangzhou (Kwangchow or Canton) Shantou (Swatow) Guangxi Zhuang (Kwangsi Chuang) Autonomous Region Nanning (Nanning) Guilin (Kweilin) Guizhou (Kweichow) Province Guiyang (Kweiyang) Zunyi (Tsunyi) Hebei (Hopei) Province Shijiazhuang (Shihchiachuang) Tangshan (Tangshan) Heilongjiang (Heilungkiang) Province Harbin (Harbin) Qiqihar (Chichihar) Henan (Honan) Province Zhengzhou (Chengchow) Kaifeng (Kaifeng) Luoyang (Loyang) Hubei (Hupeh) Province Wuhan (Wuhan) Hunan (Hunan) Province Changsha (Changsha)

Jiangsu (Kiangsu) Province Suzhou (Soochow) Nanjing (Nanking) Wuxi (Wuhsi) Jiangxi (Kiangsi) Province Nanchang (Nanchang) Jiujiang (Chiuchiang) Jilin (Kirin) Province Changchun (Changchun) Liaoning (Liaoning) Province Anshan (Anshan) Shenyang (Shenyang) Luda (Luta) Nei Monggol (Inner Mongolia) Autonomous Region Baotou (Paotou) Hohhot (Huhehot) Ningxia Hui (Ningsia Hui) Autonomous Region Yinchuan (Yinchuan) Qinghai (Chinghai) Province Xining (Sining) Shaanxi (Shensi) Province Xi'an (Sian) Yanan (Yenan) Shandong (Shantung) Province Jinan (Tsinan) Qingdao (Tsingtao) Yantai (Yentai) Shanxi (Shansi) Province Taiyuan (Taiyuan) Sichuan (Szechuan) Province Chongqing (Chung-Chengdu (Chengtu) king) Taiwan (Taiwan) Province Taibei (Taipei) Xinjiang Uygur (Sinkiang Uighur) Autonomous Region Urumqi (Urumchi) Xizang (Tibet) Autonomous Region Lhasa (Lhasa) Yunnan (Yunnan) Province Kunming (Kunming) Dali (Tali) Zhejiang (Chekiang) Province Hangzhou (Hangchow)

(Background and guidelines to the new Chinese spelling were given in the article "New Spelling for Names and Places" in the March 1979 China Reconstructs.)



March-in of the Chinese team. Gao Mingyi

THE 8th Asian Games, held in Bangkok last December 9 to 20, hosted 2,879 men and women athletes from 25 countries and regions. The number of countries, participants and events was greater than any previous Asian Games. There were 219 matches in 19 events played out on 20 sports grounds in and around Thailand's tropical metropolis.

TAN AIQING is a staff reporter for China Reconstructs.

The Games were opened at the National Stadium when two Thai athletes, a man and a woman, lighted the torch that symbolizes awakening Asia, the flame blazing throughout the 12-day sports festival.

Competition results revealed a sharp advance in levels in Asian sports. Sixty-six records in weightlifting, swimming, shooting and track and field events were equalled or broken. Some approached world levels. Nineteen countries and regions won medals. Medals won were:

Country or region	Gold	Silver	Bronze
Japan	74	64	51
China	56	60	51
The Democratic People's Republic of Korea	21	15	22
South Korea	20	22	30
Thailand	11	12	19
India	11	11	5
Indonesia	7	8	18 .
Pakistan	4	4	11
The Philippines	4	4	6
Iraq	3	7	9
Lebanon	3	2	1
Singapore	2	1	4
Malaysia	2	1	3
Syria	2	0	1
Mongolia	1	3	5
Burma	0	3	4
Hongkong	0	2	3
Sri Lanka	0	0	2
Kuwait	0	0	1

Japan remained the top gold-medal holder. China won 23 more than at the previous Games, which were her first. Some countries such as the Democratic People's Republic of Korea have caught up swiftly. Thailand, the host, placed fifth on the list, an excellent step forward.

Changes in Field and Track

China won 12 gold medals in field and track, two more than Japan. For the first time Japan moved down to second. In the 7th Games China had won only five, half of Japan's winnings.

Chinese women took gold medals in shot put, discus, javelin, high jump and broad jump, breaking four of these records. The women's high jump final was fought out between Japan's Tanami Yagi and China's Zheng Dazhen. Nineteen-year-old Tanami Yagi, who had two months earlier cleared 1.9 meters, 25 cm. more than her height, is considered one of the world's most promising jumpers. Zheng is a newcomer. Both of them topped the bar at 1.80 and 1.82 meters on the first try. But the Japanese sports woman, unfamiliar with the red earth ground and not in top condition, failed at 1.84 m. Zheng went on to clear 1.88 m., 10 cm. higher than the record, scaling it with an easy back style jump.

Runners from India and Thailand, "emerging forces" in sports, both took gold medals. Five of India's eight gold medals were in track. Long legs and superb endurance made for high performance in distance races. Hari Chand, born in°a gypsy family from the Punjab, took gold medals in the 5,000-meter and 10,000-meter races. India also won gold medals in the women's 800-meter race and the 20-kilometer walk. Thai sprinters scooped up all the gold medals for men's 100-meter, women's 200-meter, women's 400-meter relay race and men's 400-meter relay. Thailand has won the men's 400-meter relay title two times in previous Asian Games. They showed their strength at exchanging marks, baton changes and breasting the tape. This time they were 0.01 seconds ahead of the Japanese team.

Kim Ok Sun, a slim 17-year-old girl from the Democratic People's Republic of Korea, brought all eyes to her in the 1,500-meter track. Though with only two years' previous training, her light and easy rhythm raised the Asian Games record for the 1,500meter race by 6.2 seconds. She also broke the record for the 3,000-meter race by 9 minutes 24.7 seconds,

Chinese shooters congratulate their Japanese opponents on their good results. Eager spectators outside a gymnasium.

Gao Mingyi



Deng Yongqing





Gao Mingyi China's Cai Huanzong, Xiong Songliang and Li Yuejiu win the first, second and third places in the men's single all-round gymnastics event. Chinese girl diver Chen Xiaoxia.



Deng Yongqing

India's Hari Chand, winner of the 10,000-meter race. Kim Ok Sun of the Democratic People's Republic of Korea, gold-medal woman long-distance runner. Gao Mingyi

Deng Yongqing

holding her rivals 40 meters behind her all the way to the tape.

Gymnastics

Gymnastics developed later in Asia than in Europe but is now rapidly catching up. Since the 60s Japan has earned five championships in the Olympics and five in the World Gymnastics Championships. China did only fairly well in the 7th Asian Games. This time, however, she sent a team of mostly new gymnasts, whose skill won 10 of the event's 14 gold medals. Other teams such as that of the Democratic People's Republic of Korea also progressed swiftly. The three-day gymnastic performances attracted so many spectators to the 4,000-seat stadium that thousands milling around the gates unable to get in had to be satisfied with television sets set up outside.

The modern gymnast needs creativeness, high skill and great daring. The 8th Asian Games showed much advance in these respects. Many movements were of world level and some appeared for the first time.

Li Yuejiu of China, standing at 1.53 meters, performed a routine set but with difficult somersaults and body turns designed for his particular skill and physique. When he dismounted from the bars with three tight backward somersaults, landing without a

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fault on the floor, the crowd cheered wildly. Cai Huanzong, 29, the men's all-round silver medal holder in the previous Asian Games, performed with even better skill and grace. He scored above 9.50 on each of his six items and won the men's all-round title. China took first in the men's team event with 286.70 points.

China garnered all the gold medals in women's team and single all-round gymnastics. Six girls ranging from 14 to 17 were new in international competition. Their daring and fascinating routines were nearly flawless. They did particularly well on the uneven bars, all of them scoring over 9.60 points. Demure Ma Yanhong, 14, seemed like a swallow on the bars. Finishing a routine of dazzling speed, she would perform a beat swing with a half turn, spin in a tucked backward somersault and land surely and lightly on the floor.

The youngest gymnast was 11-year-old Choi Joing Sil from the Democratic People's Republic of Korea. She got 19.125 points, the top score on the vaulting horse. Over half of the gymnasts at the Games were under 20, promising a bright future for Asian gymnastics.

Swimming

Crowds of 10,000 fans watched every match at the pool in Bangkok's Kasetsart University. Japan led in 25 of the 29 events, nine of their swimmers getting three gold medals each.

Swimmers from southeast Asia did well too. The Philippines' Rosario won the men's and Thailand's Rachaniwan Bullakul the women's 200-meter freestyle titles, previously held by Japan. Fifteen-yearold Rachaniwan Bullakul was the Thailand's first gold medalist swimmer. Singapore's Junie Sng Poh Leng, 14, won the gold medals of the 400- and 800-meter women's free-style. Twenty-three Asian Games swimming records were renewed.

In diving, Chinese athletes garnered all the gold and silver medals in the men's and women's tower and board diving. Chen Xiaoxia, 16, a middle-school girl from Guangdong (Kwangtung) province collected 477.42 points, 64.71 more than the Russian diver, Irina Kalinina, who had set the world record (412.71) in West Berlin recently. Chen did a compulsory routine beautifully — with a powerful takeoff, she finished $1\frac{1}{2}$ somersaults and a twist in a 7-meter fall and entered the water with scarcely a splash. The Japanese international judge awarded her the full score.

More Exchanges

Fencing matches were an item for the first time in the 7th Asian Games. The present Games saw the number of fencers doubled. Saudi Arabia, Indonesia, Kuwait, the Philippines and Singapore were newcomers. The gold medal winner for women's single foils was China's Luan Jujie, who had placed second in the World Youth Fencing Championship. Other Chinese fencers won gold medals for women's team foils, men's team epee and men's single sabers.

International Fencing Federation President Pierre Ferri commented, "Asian fencers have made fast progress, particularly in men's and women's foils, since the 7th Asian Games." The forte of Asian fencers, he pointed out, is their speed and agility, their shortcoming is that their fechnique is not developed in a comprehensive way.

Asia has gained world levels in badminton, table tennis, field hockey, volleyball and diving. Gymnastics is approaching them. Some sports that require endurance still have a long way to catch up. Participants of the 8th Asian Games talked a lot about this question. They agreed that the key is to strengthen research on scientific training, modern facilities, and athletes' diets. Asian countries should learn the new techniques and the experience of other continents. Swimmers from Japan and Singapore and runners from Thailand, for example, have benefited from studying the training methods of the United States and West Germany.

Minoru Anzai, deputy head of the Japanese delegation, pointed out that sports levels are high in Europe because these countries have frequent interchanges. Asian countries should also have more interchanges in order to learn from each other and raise their levels.

Friendship

The 8th Asian Games were the third held in Bangkok and this time was the grandest. The festival atmosphere in Bangkok was infectious. Outside all the competition places stores sold sports sweaters, sun caps, bags with the Asian Games emblem. TV covered the events daily from nine in the morning to 8:30 in the evening. Box-office gross surpassed expectations and the Thai government decided to build a monument to the Asian Games with a portion of it. Ten thousand Thais worked for the games. A news center supplied reporters from all over the world with competition programs, results bulletins and photos.

On December 20, reporters from China's Xinhua News Agency, the United Press and the Associated Press celebrated China-U.S. relations normalization with a volleyball match. The Games organizing committee provided them with a court and international referees. After the match Alan Dawson of U.P. said, "We're poor players, all over 35 and we're not professionals, but this is my happiest moment at the 8th Asian Games."

On the evening of December 20, the athletes put on colorful costumes and joined 80,000 Bangkok citizens in the concluding ceremony. When the fire of the torch was extinguished and the Scottish song "Auld Lang Syne" was sung by a 2,000-member chorus, the reluctance to leave was evident everywhere. Then fireworks burst in the sky and the athletes shook hands, saying to each other, "See you in India in four years."

The *Mei* Flower: Harbinger of Spring

CHEN JUNYU



 \mathbf{D}^{EAR} as it is to Chinese tradition, the *mei* flower is little known in the West. It has been called the "Japanese apricot" and the "plum blossom" by westerners. Both are misnomers.

The *mei* is neither an apricot nor the ordinary plum but a unique species of flowering tree (*Prunus nume Sieb. et Zucc.*) native to China and longcultivated in the country. The late Chairman Mao wrote a good many poems and odes on this particular flower. It is frequently used to symbolize hardiness and staunchness in the face of adversity and evil.

The *mei* is much admired for its grace, beauty and fragrance, for its early and long flowering period,

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its many varieties, the ease with which it is cultivated and its multiple uses. For these reasons it is frequently listed first among China's famous flowers. The *mei* is cultivated widely along the Changjiang (Yangtze) River. Exceptionally sensitive to temperature changes, it is one of the few flowers in the world that starts to blossom at the first hint of spring while the winter's snows and winds still hold sway. This is December or January in Sichuan, Yunnan and Guizhou (Kweichow) provinces; February or March in Hunan and Hubei provinces; and March in Jiangsu, Zhejiang and Anhui (Kiangsu, Chekiang and Anhwei) provinces.

Its resistance to cold, wind and snow makes it one of the wonders of the botanical world. "Seeking the *mei* flower among snowdrifts" has been a subject for poets and painters in China since time immemorial. Some of her most famous men and women of literature and art have achieved distinction for accolades of the *mei* flower. One of these is the Song (Sung) dynasty hermit Lin Fu (967-1028) who lived by Hangzhou's West Lake and wrote: "Delicate reflections trace the limpid waters, subtle fragrances waft through the moonlit dusk." The Yuan dynasty painter Wang Mian (1287-1359) is famous for his traditional paintings of the *mei*, and also his poems about the flower.

The *mei* tree was first known in forests which lie in a scattered belt from west China to Taiwan province. But its main areas of wild growth are Sichuan, western Hubei, Yunnan, Guangxi (Kwangsi) and Xizang (Tibet), where forests exist to this day — many of them recently discovered during plant-resource investigations.

Mei trees have been cultivated in China for at least three thousand years. The sour green fruit (qingmei) was at one time used as a sacrificial offering. It was added in cooking as a tenderizer. Even today this is still done in the Xiaguan and Dali districts of western Yunnan. Later, people learned to slow-bake the fruit to manufacture such medicines as wumei, used by physicians chiefly to inhibit bacteria and reduce inflammation, and as a remedy for diarrhea and dysentery. The fruit is also made into such famous Chinese confections as qingmei, huamei and chenpimei, as well as a refreshing drink called suanmeitang.

Around the time of the Southern and Northern dynasties (420-589) and the Sui and Tang dynasties (581-907), cultivation of the *mei*, which until then had consisted principally of growing fruit-bearing trees, branched out into cultivating them for their decorative value. These trees, which bore little or no fruit, increased in variety during the Song and Yuan periods (960-1368) until, by the Ming and Qing (Ching) dynasties (1368-1911), in diversity they had surpassed the fruit-bearing varieties.

A post-liberation survey showed that China has 231 varieties of flowering *mei*. These fall into four main types — upright, apricot, pendulous and tortuous. Each type is subdivided into many forms. Among these, the Grand Green Calyx and the White-Bearded Cinnabar of Sichuan, and the "Spring Is Over," the Marbled Pendulous and the Tortuous Dragon of Jiangsu, Zhejiang and Anhui provinces are rare horticultural masterpieces, the product of years of painstaking breeding and cultivation.

The mei is a deciduous tree of the Rosaceae family and one of the few species of Prunus L. that blossoms before putting out leaves. Partial to sunshine, it should be planted on well-drained soil, since it is poorly resistant to waterlogging. It flowers in great profusion, with quantities of buds forming along the axils of its shoot leaves: one or two blossoms to each node. The graceful form, exquisite coloring and fragrance of its blossoms make it highly decorative, particularly as they appear at the juncture of winter and early spring when all other flowering plants are still barren.

It is a flower that bears close inspection, as witnessed by such traditional sayings as "grow mei flowers around the house" and "admire mei flowers from the balcony" — the implication being that they should be viewed at close range. The mei blossom, pine and bamboo, grown together, are customarily called the "three cold-weather friends" and form a typical combination in traditional Chinese gardens. A plant group consisting of mei flowers against a backdrop of pines and flanked by bamboos is considered a well-balanced arrangement ideally suited to the winter-spring season.

The trunk and branches of the *mei* tree grow in such a manner as to produce an effect of weathered, archaic simplicity. They are readily bent and trained, so that the tree is eminently suited for potting and creating miniature potted landscapes. Amenable to treatment for advancement or postponement of its flowering period, it is also an invaluable asset during the cold flowerless seasons.

Chengdu in Sichuan province and Hangzhou in east China have for centuries been renowned for their *mei* blossoms. Remembered in this connection is the hermit Lin Fu, mentioned above, who spent a lifetime planting *mei* flowers and tending cranes on Mount Gushan near Hangzhou. He is said to have regarded the *mei* flower as his bride and cranes as his children. As for Chengdu, its *mei* trees — of which the city possesses a considerable number are noted for their variety and excellence. Today, as 800 years ago, the city is a riot of color — purple, pink, white and green — when the *mei* trees blossom in December and January. One is reminded of the well-known lines by Lu Yu (1125-1210), the patriotic poet of the Song dynasty, who wrote:

Riding once west of Jincheng^{*}, I was intoxicated by the mei flowers. Twenty li their fragrance prevailed, From Qingyanggong to Wanhuaxi!**

Other than Chengdu and Hangzhou, good places to visit today for *mei* flower admirers are East Lake at Wuhan, Meiyuan at Wuxi, Guangfu at Suzhou (Soochow), Mount Meihua at Nanjing (Nanking), Mount Nanshan at Chongqing — all in the valley of the Changjiang River — Moúnt Yuantong at Kunming and Luogang at Guangzhou (Canton). *Mei* trees have also been acclimated to Beijing, thanks to adaptation experiments by horticulturists in recent years another step toward "making northern China as lovely as the south."

*An ancient name for Chengdu.

**Places of scenic and historical interest near Chengdu.



Small Green Calyx



Button Pink



Tortuous Dragon

East Ocean Red





Long-stamen Pink



Lotus Pink

Huizhou Cinnabar

Photos by Zhang Shuicheng



Variegated Marble

Iron Bone Cinnabar







Desert passenger service,

Raising 'Ships of the Desert'

A herd in the Alxa grassland.



Desert lake.

Photos by Litt Chen



Raising 'Ships of the Desert'



LIU CHEN

Transport team.

Xinhua

Scientific breeding has Liu Chen produced fine camel hair.

O NE-FOURTH of all the domestic camels in China are found in the Alxa grassland of the Ningxia Hui Autonomous Region — some 140,000 of them in the Alxa Left Banner (county) alone. Half-desert, half-steppe, this is not agricultural country but a land of grazing animals — sheep, horses, cattle and the two-humped Bactrian "ship of the desert" (See December 1978 China Reconstructs).

The Alxa Left Banner, a 100,000-square-kilometer county, lies beyond a pass in the Helan Mountains about 30 kilometers northwest of Yinchuan, capital of the autonomous region. Its rainfall is scant. Harsh winds carry great amounts of the sand of the Tenger (Tyngeri) Desert. Grass is sparse but brush and scrub grow everywhere. It is natural camel country.

The area has raised camels for centuries. By the time of liberation, however, the number of camels had dropped by two-thirds, the result of a reactionary rule that had slowly stifled animal husbandry. The new people's government established in 1949 helped the herdsmen organize collectively. Today their herds have more than tripled.

The Zahanbruge brigade in the eastern part of the desert has over 2,000 camels. Outside the village of new houses is a large green pasture irrigated from a deep well. The camels come in from the pastures

LIU CHEN, a staff photographer for *China Reconstructs*, wrote this story in the Alxa grassland of the Ningxia Hui Autonomous Region in north China. by themselves when a pump fills their troughs with water. With older camels leading, they return along the paths to their particular grazing grounds. No one is needed to herd them.

From June to November the animals roam freely in the pastures. As winter approaches they feed both day and night, storing food in the form of fat in their two humps. Each of these contains as much as 40 kilograms, or a calorie equivalent of 200 kg. of fodder. The camel's stomach has many small sacs in which it stores water. It can drink as much as 50 kg. at a time. It can work for a week without eating or drinking. When grass is scarce the camel eats the tough, bitter plants of the desert which other animals will not touch. It cools itself in the summer heat by facing the wind; in the cold winds of winter it kneels or crouches back to the wind.

RAISING camels involves hard work and planning. In the winter they are moved to special pastures where there is enough fodder, and also shelter for the females and the young. In this period the herdsmen go out early with the herds and return late. In the summer, when less herding is required, the herdsmen are busy eliminating parasites and inoculating the animals against diseases.

Most communes and brigades in the Alxa Left Banner are expanding their camel herds, sinking more wells, irrigating pastures and fields for growing fodder, and building large silos, stables and shelters. There are 4,600 hectares in the banner where fodder is grown under irrigation. These yield 10,000 tons, enough for all the camels. In addition there are 650,000 hectares of dry-land pastures.

T HE improvement of the breed is carried on with the help of the animal husbandry bureau and various scientific organizations. One of the best brigades in this work is the Tuanjie (Solidarity) brigade in the north of the banner. With only 200 members, half of them Hans and the others Mongolians, the brigade has overcome poor natural conditions and enlarged its herds to 3,000 camels. In the past when the animals mated freely and were scattered in ordinary pastures, they were small and the amount of hair collected from them was low.

The brigade began its scientific breeding in 1965. They selected 200 large females with long heavy hair, gave each a number on its ear and divided them into four groups. They chose 16 good males from other brigades and communes. Again in 1974 they selected good animals, expanded their breeding groups and retained 93 of the best camels for further breeding. Today their new stock is strong and sturdy, and produces a fine yellow, light yellow or orange brown hair. The amount collected per animal has risen from around 2 kg. to nearly 4 kg. The highest yield is 7 kg.

The brigade's experience was spread throughout the banner by the animal husbandry bureau. There are now 12,000 camels in scientific breeding groups, and the quality and yield of hair has gone up greatly. The banner produces 500 tons of camel hair every year. Everything on the camel is valuable. Its hair is long and soft, strong and durable, does not mat or soil easily, and resists moisture and cold. Camel hair sweaters stand wear. Mattresses made of it are light and do not become lumpy. Camel meat is dried and stored. Camel milk is an important food for the herdsmen — it is used in tea and is made into butter, cheese and a fermented drink. Camel skin makes a high-grade leather. Even the camel's manure is used — for fuel.

T HOUGH China is moving rapidly toward modernization, the camel is still an important means of transport in the desert. Weighing half a ton, it has the pulling power of two or three horses, up to 1.5 tons. Carrying a 200-kg. load, it can travel 60 to 70 kilometers in an eight or nine-hour day. Camels are used locally for carrying food, tools, items of daily life and mail to brigade and commune teams opening up new fodder fields and pastures in the desert. On the return trip they carry animal products and minerals from small mines. In the southern part of the desert a 1,000-camel transport team carries sodium sulphate from Tonghu Lake through 30 kilometers of desert to a nitrate factory in Zhongwei county.

A new thing in the desert is regular passenger service — by camel. At Toudaohu, the terminal of a long-distance bus line, a small camel caravan takes passengers to three communes in the heart of the desert which do not yet have other transportation. Not as comfortable as a bus but perhaps more fun.



The **Correction:** smaller photo on page 12 in our March 1979 issue should read, "Yanan, 1944: (right to left) Huang Hua, Foreign present Minister; Dr. Ma Haide; Capt. Paul Domke (an American army observer); and Ke Bainian.

CHINA RECONSTRUCTS

Regular physical checkup.

Ningxia Pictorial



Better field layout, a water system, forest belt and roads have given this brigade in Jiangsu province a yield of 15 tons per hectare.

CHINA must feed her people — more than a fifth of the world's population — and do it with only seven percent of the globe's cultivated land. In other words, one hectare has to feed nearly eight people. Moreover, China's rainfall varies greatly, making stable farming much more difficult. Obviously the basic solution lies in greatly increasing the perhectare yield of cultivated land by intensive work on the fields, or "capital construction." This was what Chairman Mao meant in the 50s when he called on the people "to transform China in the spirit of the Foolish Old Man who removed the mountains."

Rainfall in China most of the time is either too little or too much, depending on the season and the area. It is not uncommon for one place to be flooded while another suffers drought. Often enough, both hit the same area successively. This occurs in the north and south alike. Records kept since the Han dynasty show 1,092 floods and 1,056 droughts in the 2,100 years before 1949. Though tremendous strides have been taken in flood and drought control, nature's damage still hinders agricultural production.

The first wide-scale attempts to control nature and improve farmland began when China's peasants moved into socialist collective farming shortly after liberation. Some of this was done with state assistance, some by collective units themselves. Today

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China boasts over 80,000 reservoirs and a huge number of drainage and pumping stations. Her irrigated farmland has increased since 1949 from 16 million hectares to over 46 million. Two thirds of her lowland has been converted into normal crop land and one fourth of her hill land into terraced fields.

Shortly after liberation Chairman Mao pointed out that China could feed herself only by farming intensively and he predicted that China would one day reach the world's highest per-unit output in agriculture. A National Program for Agricultural Development set the targets for 1956-67 at 3 tons per hectare north of the Huanghe (Yellow) River, 3.75 tons north of the Huaihe River, and 6 tons south of the Huaihe River. Chairman Mao thought these figures should reach 6 tons, 7.5 tons by the 21st century. In fact, many advanced units have already reached these goals. In 1978, 16 counties north of the Huanghe River harvested over 6 tons per hectare, 5 counties north of the Huaihe River got over 7.5 tons, and Suzhou (Soochow) prefecture south of the Huaihe River obtained 15 tons over a large area.

THE aim of the capital construction of farmland is to create fields that give high and stable yields in spite of flood or drought, in general minimizing natural reverses and guaranteeing a steady crop increase. Capital construction in industry demands



Leveling fields in Kangzhuang commune, Shandong province.

good planning, surveying and designing. In agriculture it means rearranging mountains, rivers, fields, forests and roads, with the emphasis on field improvement and water conservation.

Agricultural capital constructions must take into consideration the careful programming of river distribution areas. Water control projects are combined with forestation, countryside transportation and the building of small hydropower stations. Large, medium and small projects are planned to supplement each other. The use of water resources must be rational and multi-purpose.

No large project can be started without the consultation of higher organizations and the local units. Leaders personally guide the surveying. Plans must suit local conditions. Water projects must include adequate irrigation and drainage systems. The use of river water is combined with wells.

Land must be used rationally. Field rebuilding in hilly areas aims at level plots, thicker top soil able to conserve water, soil and fertilizer. Fields on the plains become garden-like plots, complete with networks of canals, tree belts and roads. Lowland areas require strip fields, plots raised above the surrounding ground level, ditches, canals and pumping stations for draining surplus water. Land leveling, soil improvement and more fertilizer are required everywhere.

The capital construction of fields is done mainly with the strength of the socialist collective economy of the people's communes themselves, with government assistance when necessary. Production brigades, communes, counties, even prefectures pool their funds and manpower for projects on an equal costvalue level. There are two types of workers: regular construction workers, about 5 percent of the total, and commune members who generally work in farming slack seasons.



Full use of hillside land in Huangjiabu commune. Hunan province.

The central government and the provinces invest a large percentage of their funds for field capital construction. Jiangsu (Kiangsu) province, for example, recently allotted 70 percent of its annual budget for agricultural development, the greater part of this going to field capital construction. Industry gives priority to rural needs such as well drilling machines, diesel motors, pumps, cement, steel, explosives. Agriculture took 11 percent of China's electricity in 1977 (compared with 0.7 percent in 1958) and paid 20 percent less for it than industry.

I N spite of progress, China's agriculture still has problems. It is not yet possible to avoid the damages of nature completely. Irrigation and drainage capacity in some places is still insufficient. Some key rivers have not been under total control. Present water control projects need to be systematized and some have not reached designed capacity. Some of them need more rational, scientific management. Some areas have developed irrigation but neglected drainage work, resulting in the alkalization of land. Moreover, the effect of Lin Biao and the gang of four has been to drag field capital construction backward.

It is clear that to modernize China, agriculture must keep pace with the rapid speed of industrial development — and basically this means more rapid field capital construction and water conservation on a broader scale.

China aims at 400 million tons of grain by 1985 and, for every 15 people in the rural areas, one hectare of irrigated land by 1980 and one hectare of stable, high-yield land by 1985. The main factor in achieving this target is systematizing and completing key water conservation projects now under construc-



tion and bringing existing ones up to full capacity. Where conditions permit, new projects will be built to add to irrigated areas.

There is plenty of water in China as a whole, but too much in the south and not enough in the north. Present plans are to divert 30,000 million cubic meters of water per year from the Changjiang (Yangtze) River near Yangzhou in Jiangsu province to Tianjin via the Grand Canal. Pumping stations will lift the water step by step into the Huanghe (Yellow) River where it will flow to the north. This will irrigate an additional 4 million hectares in Jiangsu, Anhui, Shandong and Hebei provinces. It will supply water for industrial use in cities along the diversion line and improve navigation. Along with this, work will be speeded up on the present Huanghe, Changjiang, Haihe, Huaihe, Songhua and Zhujiang (Pearl) river control projects.

By 1985, China's agricultural picture will show tremendous improvement.

This pumping station in Gaoluo commune, Shanxi province. lifts water 96 meters to irrigate 600 hectares.

Planting trees and building water projects go together, Shijiazhuang prefecture, Hebei province. Photos by Xinhua





L IU Yaoming had made a name for himself in the fifth grade of the Chengguan Primary School in Yingcheng county, Hubei (Hupeh) province. His marks averaged more than 30 points below passing and the only thing he seemed good at was disrupting the class. At a sign from him his friends would start whistling and making faces, which, needless to say, raised havoc.



He had been a good pupil in the first grade but the general breakdown in discipline during the gang of four's time had gradually left its mark on him. "Zhang Tiesheng handed in a blank exam paper and got into university," he reasoned, "and the newspapers always played him up as a hero, so why should I sweat over my lessons?" He refused to do homework and when his teachers criticized him he would glare back and snap, "You're wrong if you think I'm going to study for *you*!" Then he'd swagger off with a smirk on his face as if to say, "See? I'm not scared of any teacher!"

education was When being brought back to normal after the gang of four fell it was found that the pupils differed widely in what they had managed to learn over the previous few years. In almost every class marks ranged from zero to a hundred. Many schools began to reshuffle their classes, dividing them into slow and fast groups. The object was to prevent the better pupils from being held back and at the same time to help the others catch up. Liu Yaoming's school also did this. Two teachers with more experience in child psychology and guidance were put in charge of the "slow" class. Children in this class were to be given extra help wherever they were deficient. Liu Yaoming was in this class.

At first most of the "slow" pupils, believing themselves disgraced, were dispirited. Not Liu Yaoming. With a devil-may-care grin he would say, "Slow or fast class, who cares! I'll coast along all right. When others design buildings, I'll lay the bricks."

Liu Yaoming soon discovered that the two teachers — one a woman named Zhu Huaying and the other a man named Li Yinsheng — were not so bad. They didn't pull long faces or scold him for infractions of discipline, they just calmly explained why he was wrong. Best of all, both teachers stayed after class to tell the children stories. Yaoming loved stories and always sat close to the teacher to listen.

 $\bigoplus_{i=1}^{NE} afternoon Teacher Li was$ telling a story about new advances in science and technology. He mentioned new building synthetic methods — walls of materials locked together, plastic floors glued in place. . . . The class was fascinated. All of a sudden he looked at Yaoming and said, "What'll you do, Yaoming, when the day comes that China need bricklayers any doesn't more?"

Yaoming's jaw dropped. Of all the things his teachers had ever said to him, nothing shook him more than this. He kept thinking about the teacher's description of the new horizons modernization would open up for China. By the year 2000, he figured, he would be 35. What could he do if he didn't know anything about science and technology? The thought made him uneasy and his old driftalong attitude began to crumble.

He made up his mind to begin studying. But it wasn't easy because he was very far behind. Arithmetic problems that others solved in a few minutes took him half an hour to do — incorrectly more often than not. For a composition entitled "My Teacher" he wrote about seventy words and then couldn't go on. "It's no use," he thought. "I'm just too dumb."

His teachers knew his troubles. One day after class a group of pupils had clustered around Liu Yaoming admiring some flowers and birds he had carved on the shaft of his fountain pen. His teacher walked over. "What a clever thing!" he said. "Yaoming, would you carve some flowers on my pen too?"

Liu Yaoming, usually the object of criticism, felt a glow of pleasure. His lost confidence began to return. "If you'll study as diligently as you carved those flowers," the teacher told him, "I promise to help you with the same diligence and patience."

Then the teacher told him a story. One day when the Han dynasty general Li Guang was hunting he suddenly saw a tiger crouching in a thicket. Quickly he drew his bow and sent the arrow whistling away. He discovered, however, that what he'd shot was not a tiger but a big rock that only looked like one, and his arrowhead was deeply embedded in it! Amazed at his own strength, the general tried to repeat this feat. But no matter how hard he tried, he failed. Why? Because when he had loosed his first arrow he had believed he was shooting a real tiger and put every

ounce of strength into the effort. The moral? One has to be in dead earnest if he wants to succeed.

A LL at once Yaoming saw why the teacher was telling him this story. Shyly he said, "From now on I'm going to be in dead earnest about my studies — just like that general. If the others work one hour, I'll work two, and if they work two hours. I'll work four!"

Pleased, the teacher began giving Yaoming more help with lessons he had missed, explaining difficult points over and over until he caught on. Whenever he saw Yaoming frowning and perplexed, he would be there with suggestions and pointers.

One night the teacher was about to go to bed when he heard a knock at the door. It was ten o'clock and raining outside. When he opened the door he found Yaoming standing there. "Teacher," the boy said, "there's a problem I can't figure out. . ." The teacher was deeply touched.

"Liu Yaoming's really changed," he later told other teachers. He was often seen practicing his writing in the classroom even when all the other pupils had gone to the playground. Once after helping him with arithmetic, the teacher said, "We'll stop here today." Standing up, Yaoming replied, "I'm not stopping. Teacher, give me some more tricky problems to do. I'll figure them out at home."

The school was open in the evening for study, and it was usually the fast pupils who went. Now Yaoming also began to go. Other "slow" children followed his example until the rooms were often filled to capacity.

In the mid-term arithmetic exam Liu Yaoming won third prize the first award he had ever earned. At the end of the term he got one hundred in arithmetic. From last in class he jumped to first. He was able to enter a county middle school well-known for its high scholastic standards.



Drawings by Sha Gengshi

(Continued from P. 24)

E ARLY in the seventies Premier Zhou Enlai, the well beloved, met four famous American doctors and their wives. Dr. Sam Rosen and his wife Helen, Dr. E. Grey Dimond and his wife Mary, all strong supporters for better U.S.-China relations. Manny and Grace Granich came, and Premier Zhou hosted a big meeting of visiting and local Americans. Manny Granich had been not just an onlooker. He had played an important part in editing *The Voice of China* in the hectic days of 1936-37 in Shanghai, a journal that had wide influence among youth at that time.

Another meeting of the same kind was held when William Hinton came on a visit. Then came the visits of Kissinger and President Nixon, and gradually the stream of travelers from the United States increased. After the downfall of the gang of four this flow grew much greater. More and more visits of Chinese scientific and cultural groups to the U.S.A. took place and an understanding that had not previously existed grew. Ma Haide, recovering from a serious operation, returned to his U.S.A. for the first time in 40 odd years and spoke widely. So was the basis laid for the triumph of recognition, which reflects such great credit on both the Chinese and the U.S. leadership.

The people of the world hate war, all it threatens, all that preparations for it cost. So great an event as that of the rapprochement of China and the U.S.A., with its realistic backing for peace, is something that all peoples of the Pacific should welcome, for domination by a new imperialism there would strike at the independence of all peoples. The quarter of the world that is China constantly strives for peace and reaches out to all people to help to maintain it. To understanding minds, the new stage in U.S.-China relations will be well understood as the progressive thing it is.



'Ten Thousand Volumes' of Fossils

ZHOU MINGZHEN

S HANWANG VILLAGE in Shandong (Shantung) province is the site of one of China's most famous fossil beds. It is like a natural history museum, with a wide variety of fairly well-preserved plant and animal fossils. The village lies 20 kilometers east of the Linqu county town in central Shandong. The fossils are embedded in layers of diatomite, an accumulation of siliceous shells secreted by diatoms, an aquatic algae.

About 15 million years ago, in the mid-Miocene Epoch of the Tertiary Period, this area was a large lake of calm water fostering 30 varieties of diatoms along with other water plants and animals. The eruption of a nearby volcano threw huge quantities of ash, along with vegetable matter, into the lake. Finally lava covered the entire Shanwang area. The

ZHOU MINGZHEN is Secretary-General of the National Society of Paleontology. things buried were preserved in fossilized diatoms. The layers of diatomite were revealed in more recent geological times as a stream eroded ravines and gullies into the surrounding hills. The gray-white paperlike layers of diatomite are known locally as the "ten thousand volumes."

O PENING up the "volumes," or excavating the fossils, reveals mosses, ferns, gymnosperms and angiosperms among the plants, and insects, fishes, amphibians, reptiles and mammals among animal life. Some of the fine veins of the leaves have retained their original color almost like newlypressed specimens. They reveal the many species of trees there then. About two-thirds of them are species that now grow in the valley of the Changjiang (Yangtze) River, though the fossil varieties had broader leaves than those of today. This indicates that the climate of that area and the entire Shandong



Scientists examining fossils at Shanwang. From left to right: Prof. Chang Longqing, Chengdu Geological Institute in Sichuan; Prof. Wang Yu, Nanjing Institute of Geology and Paleontology of the Chinese Academy of Sciences; Prof. Pei Wenzhong, the Institute of Vertebrate Paleontology and Paleoanthropology of the Chinese Academy of Sciences; Prof. Lu Yanhao, Nanjing Institute of Geology and Paleontology; Prof. Yang Zunyi, Beijing Geological Institute; Zhou Mingzhen (the author), Ou Yuanren, Zhongnan Mining Institute, Hunan. Mao Song

Diatomite deposits in which the fossils were preserved. Bird'seye view of Shanwang.





The Shanwang-Shandong bird.

Basaltic rana.





Dragonfly.



Turtle.





A hitherto unknown variety of Hemiptera.





Snake (Mionatrix diatomus).

A skeleton and skull of an ancient deer (lagomeryx teilhardi).











Seed of the Chinese ailanthus.

Leaves of the Chinese coptis.

Birch twig.





Flower the of Astronium truncatum.

Ceratophyllum, a water plant.



Photos by Wang Zhefu, Mao Song and Luo Wenfa



A complete fossil of the hornless rhinoceros. Mao Song

peninsula was warmer and more humid than at present. The remaining varieties of trees, including poplar, willow, elm, chestnut, walnut, hazelnut, peach, plum, loquat and persimmon still grow today in the valley of the Huanghe (Yellow) River, of which this area is a part.

THERE are animal fossils there which are rarely seen in other parts of the world. First to describe them was the celebrated vertebrate paleontologist Prof. Yang Zhongjian (Yang Chung-chien), who began making geological studies and collecting fossils there in 1935. Best-preserved and most vivid are the fish fossils, including a group of them that look like a shoal at the moment of a chase. There are complete fossils of salamanders whose delicate structure can be seen clearly. They are similar to some which when found in Europe in 1726 were at first believed to be fossils of people caught in a flood and buried. Among the fossils are those of snakes and turtles and many of frogs in various stages from tadpole to adult. The mammals include mice whose tiny whiskers and hairs can be seen clearly, bats with membrane wings as well as deer, tapirs, boars, hornless rhinoceroses and other larger animals. Insects include bees, moths, primitive earwigs and dragonflies. Some fossils not only show the fine wing membranes but also retain the original color.

Not long ago two of the most complete fossils of ancient birds ever found were dug up. One of them, unlike any fossil bird found anywhere else, has been named the Shanwang-Shandong bird. It is considered to be a member of the *phasianidae* family, to which pheasants also belong (see the February 1978 China Reconstructs).

(Continued from P. 22)

plums and lychees, 50 to medicinal herbs, 30 to fir trees and 13 to rapeseed and bamboo. But at the same time through more intensive cultivation on land given over to grain output was also raised so that in 1977 and 1978 the brigade had a surplus of 200 tons to sell to the state.

As a result of disobeying the gang of four's orders, by last year the brigade was getting a million yuan from sidelines, more than half of its income. Following the gang's instructions, I was told, was one of the principal reasons for the drop in production and standard of living in the prefecture a few years ago. But last year the Linhuishan brigade was able to increase members' income by an average of 130 yuan for every person in the 7,607-people brigade. More than half the families have money in the bank and most have built themselves new houses.

Changes such as I saw in my travels are noted by many overseas Chinese who visit their native places, observed Yi Meihou, Vice-President of the All-China Federation of Returned Overseas Chinese and President of the Guangdong province branch, when I dropped in on him later as I passed through Guangzhou (Canton). "But," he said, "much remains that is still backward and many wish to contribute their efforts to building up their hometowns and to the early realization of the 'four modernizations'."



Scene in the Taihang Mountains.

THE Taihang Mountains along the western edge of the north China plain are known in modern Chinese history as the site of many fierce struggles against the Japanese invaders during the late 30s and 40s. Many people recall the words of "Song of the Taihang Mountain Guerrillas" written at that time by the composer Xian Xinghai. "Look! A thousand mountains and valleys, a wall of bronze and iron. The beacon fires of resistance burn atop the Taihang Mountains."

It was also in the Taihang Mountains that the Canadian doctor Norman Bethune lost his life while

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THE TAIHANG MOUNTAINS

HOU RENZHI



working for the Chinese people's liberation. Coming to China in early 1938, while working as a medical adviser in the Taihang mountain area he contracted blood poisoning while operating on a wounded soldier and died on November 12, 1939 in the mountain village of Huangshikou in Tangxian county on the eastern edge of the mountains.

FROM ancient times one of China's most important north-south communication routes has run along the foot of these mountains where they meet the plain. Because in the early days the plain contained many lakes and swamps, the route followed the mountains for 600 kilometers until it reached Beijing (Peking) at the top of the plain. One of China's main northsouth rail lines, that from Guangzhou (Canton) in the south to Beijing, now follows this route after it crosses the Huanghe (Yellow) River.

After it reached Beijing the old route divided into several branches to cross the Yanshan Mountains, which encircle Beijing on three sides, and then went northward to regions beyond the Great Wall. This fact was important in the rise of Beijing some 3,000 years ago.

Many of the ancient cities of north China were along this route. They included Yin, which from the 14th to 16th centuries B.C. was Shang dynasty capital, northwest of present-day Anyang in Henan (Honan) province; Handan (Hantan), capital of the







Another Taihang temple, Jade Emperor Temple in Jincheng county, Shanxi province, has statues of figures which are one way the 28 constellations of the zodiac are represented in China.

Nanchan Buddhist Temple.

state of Zhao (Chao) during the Warring States period (475-221 B.C.) and an important industrial center today; Lingshou in Hebei (Hopei) province, one of the capitals of the state of Zhongshan in the same period; and Zhengding near Shijiazhuang in Hebei province, still a county town today. All of these rose between two and three thousand years ago.

Situated where the paths out of the Taihang Mountains joined the main road, these cities have connections with both mountains and plains. There were eight such routes out of the mountains. The most important was that west of Zhengding. It is known as Jingxing (well-like) Pass for the precipitous cliffs on either side.

Everybody knows about the Great Wall, but few know about its inner wall. From the narrowest section of Jingxing Pass, the part known as Niangziguan, during the Ming dynasty (1368-1644) a wall was built running northward along the eastern foothills of the Taihang Mountains to Daomaguan Pass where it

Canal in Jingxing county, Hebei province.



joined another inner section of the Great Wall. The latter went further north till it joined the Great Wall itself at Badaling (Pataling) northwest of Beijing.

THESE mountains are the home of the Foolish Old Man Who Removed the Mountains. This legend of the Foolish Old Man took on new meaning for the people of China when Chairman Mao retold it in an important speech in June 1945 to the Seventh National Congress of the Chinese Communist Party. Coming on the eve of victory in the war with Japan, the speech encouraged the people to continue to fight for still greater victories. In the legend, the Foolish Old Man and his sons worked to remove two huge mountain ranges before their house. One of them was the Taihang Mountains.

Since liberation, this spirit shown by the Foolish Old Man has inspired the Chinese people to struggle to recover from the effects of natural disasters and transform their rivers and mountains. One example is the Red Flag Canal winding through the Taihang Mountains. This spirit is shown in the color documentary "How the Foolish Old Man Removed the Mountains" by the famous film team of Joris Ivens and Marceline Loridan.

THE Taihang Mountains are the site of some famous ancient buildings. Thirty kilometers southeast of the county town of Jingxing in Hebei province is the Mt. Cangyan pavilion-bridge across a deep valley. It was first built in the Sui dynasty (581-618 A.D.) and repaired in the Qing (Ching) dynasty (1644-1911 A.D.). Standing 70 meters above the ground, with sunlight shining on it, the pavilion looks like a castle in the air. It is reached by 360 stone steps through a tunnel in a mountain.

On Mt. Wutai in the northwest part of the Taihang Mountains are two wooden structures over a thousand years old. One is the Nanchan Buddhist Temple, the oldest building in China. It was built in 782 A.D. on the site of an earlier temple. The other is the main hall of the Foguang Buddhist Temple. Constructed in 857 A.D., it is the largest such hall in China.

The tallest peak, Xiaowutai, lies 110 km. west of Beijing. Reaching 2,870 meters above sea level, it is taller than the famous Mount Tai (1,524 m.) in Shandong (Shantung) province, and can be called the tallest peak in north China.



Commemoratives for the Guangxi Zhuang Autonomous Region



THE Chinese Ministry of Posts and Telecommunications issued on December 11, 1978 a set of three stamps to mark the 20th anniversary of the founding of the Guangxi Zhuang (Kwangsi Chuang) Autonomous Region.

Stamp 1, people of different minority nationalities in Guangxi sing and dance to celebrate the occasion. Purple, red, light blue, yellow, orange, claret, green, gray and black.

Stamp 2, industrial development in the region. Red-orange, brown-purple, greenish yellow, gray, red and lemon.

Stamp 3, agricultural growth in the region. Green, gray-blue, red, apple-green and gray.

The first two are of 8 fen denomination and the third is of 10 fen. Measurement 27×60 mm. Perf. 11. Color photogravured. Chinese characters read: "20th Anniversary of the Founding of the Guangxi Zhuang Autonomous Region." Serial numbers: J. 33 (3-1 to 3-3).





Medicinal Plants

O^N September 15, 1978 the Ministry of Posts and Telecommunications issued a set of five special stamps featuring effective medicinal plants.

Stamp 1, 8 fen, Panax ginseng. Black, yellow, orange-red, dull green and vermilion.

Stamp 2, 8 fen, Datura metel. Black, blue, white, light blue and vermilion.

Stamp 3, 8 fen, Belamcanda chinensis. Black, turquoise-green, yellow and vermilion.

Stamp 4, 8 fen, Platycodon grandiflorum. Black, turquoise-blue, violet, yellow and vermilion.

Stamp 5, 55 fen, Rhododendron dauricum. Black, mauve, turquoisegreen and vermilion.

All stamps measure 30×40 mm. *Perf.* 11. Serial numbers: T. 30 (5-1 to 5-5). Color photogravured.





CAAC-China's Airline

A NEW runway over three kilometers long and 50 meters wide has been completed at the Beijing (Peking) International Airport. A terminal building, hotel and other buildings are under construction. The airport will have facilities for modern aircraft.

China operates 12 lines to 13 countries totaling 50,000 kilometers. They reach Pyongyang, Hanoi, Rangoon, Karachi, Tokyo, Moscow, Teheran, Tirana, Addis Ababa, Bucharest, Belgrade, Zurich and Paris. Aviation contracts have been concluded with over 30 countries, and agency relations set up with more than 100 foreign airlines.

Her domestic network, with Beijing as the center, has more than 130 lines flying a total of 150,000 kilometers. Over 400 regular flights per week connect 21 provinces, 3 municipalities and 5 autonomous regions. There is as yet no service to Taiwan province. The network reaches 80 cities in the interior and frontier regions.

The Shanghai-Hangzhou (Hangchow)-Changsha-Guilin (Kweilin) line opened last year has cut the time to four hours. It used to take 24 hours because of a change of planes in Guangzhou (Canton). To meet tourists' needs the CAAC (Civil Aviation Administration of China) is steadily increasing the number of scheduled flights. For example, there are now 42 flights a week to scenic Guilin. Regular flights from Hongkong to Guang-

The Beijing (Peking) International Airport

Li Xin



zhou are now operating during peak periods of traffic.

In the past few years the CAAC has opened lines to Fuzhou (Foochow) on the southeast coast, Urumqi and Yining in the northwest, Simao in the south and Lhasa in Xizang (Tibet). The first survey flight to Lhasa was made in 1956. The "roof of the world" presents difficult flying conditions. In March 1965 a regular Beijing-Chengdu-Lhasa line was opened and in September 1975 a Lanzhou-Lhasa line was also begun. The Beijing-Nanchang-Fuzhou line connecting the capital with the southeast coast was opened in November 1975. The Guangzhou-Beijing flight has been extended to Shenyang in the northeast. The Beijing-Urumqi and Beijing-Lanzhou-Urumqi-lines linked the northwest with the capital. Last year a Shanghai-Lanzhou-Urumqi service was opened, its 3,600-kilometer route becoming the longest in China. In the ancient times of the Old Silk Road, Xinjiang (Sinkiang) was the gateway to the West. Today it is the gate-CAAC lines flying to the Middle East and European countries.

China's civil aviation started almost from nothing. In August 1950 there were only flights from Tianjin (Tientsin) to Guangzhou and Chongqing (Chungking). The appropriated new government large amounts to expand airports and air services. Two international airports built in Shanghai and Guangzhou were expanded in 1964. Many modern airports have recently been opened, including at Hefei in Anhui (Anhwei) province, Hangzhou (Hangchow) in Zhejiang (Chekiang) province and Urumqi in the northwest. All airports have been improved. Generally speaking, however, China's young civil aviation still has a long way to go.


Guilin Airport

China's Airlines

Routes in effect April 1, 1979.

by Lu Shifang



APRIL 1979



Rent collection, Eastern Han style. Facsimile of a carving in a Han tomb in Mixian, Henan province.

Chinese History—VII Eastern Han Peasant Revolts

Festive entertainment, rubbing from Eastern Han carved brick unearthed in Chengdu, Sichuan province.

Red Eyebrows,

Greenwoodsmen,

Yellow Turbans

JIAO JIAN



THE Eastern Han dynasty (A.D. 25-220) was born amid a peasant uprising, and another uprising near its end aided in the disintegration of the dynasty.

Through the previous dynasty (Western Han, 206 B.C.-A.D. 8) as the feudal economy continued to develop, the landlords had ceaselessly appropriated the land of the peasants. This trend became even more serious as Western Han drew to a close. It was common for landlords to possess several thousand hectares. Nobles, high-ranking officials and big merchants were also large landowners and these banded together to form the dominant force in the country. The landless peasants were forced into becoming slaves, and others wandered about as vagabonds. The contradiction between the landlords and the peasantry sharpened. Large-scale revolt was brewing.

Wang Mang's Rule

The court itself was in a perilous way. In A.D. 8 Wang Mang (45 B.C.-A.D. 23), nephew of Han Yuan Di's empress and regent to the infant emperor, deposed him and proclaimed himself emperor. He named his rule the Xin (New) dynasty; it was to last only from A.D. 8 to A.D. 24. He embarked on a program of reforms, hoping to mitigate the contradiction between the landlords and peasantry and stabilize his rule. He declared all land to be royal property and prohibited trading in private slaves, though not slavery itself. A couple was allowed to hold only seven hectares of farmland: any excess was to be divided among clansmen or neighbors. Landless families could apply to the government for grants of such land. These decrees, however, met with such opposition and sabotage from the nobles, high-ranking officials and big landlords that three years later they were rescinded.

The people were further reduced to bankruptcy by the fact that Wang Mang changed the monetary system and several times issued new currency. In the last years of his reign drought and locusts caused immense damage in Hubei (Hupeh) and Shandong. These two stricken areas gave birth to peasant armies. In central Hubei it was the Greenwood Army gathered together in A.D. 17 under Wang Kuang and Wang Feng. It took its name from the forested hills, now the Dahong Mountains, where they organized their forces. It attacked local troops and seized food and goods from the landlords. Within several months it had grown to 8,000 men.

Uprisings

In Shandong a peasant uprising broke out in A.D. 18 led by Fan Chong. This group was known as the Red Eyebrows because of the practice of paint-

ing their eyebrows red as a means of identification. Fan Chong's troops had strict discipline and it was agreed that causing death to one's own people was punishable by death. Fan Chong rallied to him many other peasant armies that had sprung up in the province. In coordination with the Greenwood Army his forces fought imperial troops in Shandong, Henan, Shaanxi and Shanxi and suppressed many corrupt officials at prefecture and county levels.

In A.D. 22 Wang Mang sent a hundred thousand troops to quell the Shandong rebellion. They killed and burned and everywhere aroused the hatred of the people. At Dongping in western Shandong they were defeated by the Red Eyebrows, which later swelled to an army of several hundred thousand.

Meanwhile Liu Xuan, a member of the Han dynasty ruling family who had joined the Greenwood Army, seized its leadership. In A.D. 23 his forces took the capital Changan with the aid of a people's rising in the city. Wang Mang was killed and that put an end to his short-lived dynasty.

Soon afterward Liu Xuan had many of the peasant commanders killed. There followed a confused period in which the Greenwood Army split up. One group went to augment the Red Eyebrow forces, who under the command of Fan Chong retook Changan in A.D. 25. But the landlords in the vicinity organized their own armed forces to besiege the city, and hid their grain in the hope of starving the Red Eyebrows and the people of Changan into submission. Unable to hold out, the Red Eyebrows withdrew to western Henan. There they were defeated by a segment of the Greenwood Army under Liu Xiu, another member of the Han dynasty family. In A.D. 25 Liu Xiu took the city of Luoyang to the east, made it his capital and declared himself emperor, reestablishing the Han dynasty. This is what is known as Later or Eastern Han.

Big Landlords Take Over

This regime was set up with the support of the big landlords who made up most of its generals. They created huge estates by seizing land from the peasants and forcing them to become their serfs. These people were not allowed to leave the land and a system of hereditary serfdom grew up. A self-sufficient economy gradually developed on these estates. Food crops, hemp, silkworms, clothing of hemp and silk, wine, sugar and livestock were all produced on the estate itself.

The big landlords usually controlled thousands of serfs, possessed a huge amount of property and lived a life of luxury and extravagance. They built fortified manors with watchtowers and high walls surrounded by moats. They had their own armed



Beacon tower on the Old Silk Road in Kuqa county, Xinjiang, warned of threats to east-west traffic.

forces to protect themselves against attacks by peasants, and developed into warlords controlling large areas. Some landlords entrenched themselves in power at the county or prefecture level or in the central government.

To evade taxes, they falsified figures on land and serfs. With the aim of tightening control and increasing tax income the government ordered a census of population and land. The officials dared not step on the toes of the big landlords so instead they recorded every inch of land held by the peasants, even houses and courtyards, as arable land. In this way they lightened the landlords' tax burden and shifted it to the independent peasants.

In the early years of Eastern Han large tracts of farmland lay uncultivated, but gradually agricultural production was restored through the hard work of the serfs and individual farmers. In both north and south many canals and reservoirs were built for irrigation.

By the middle of Eastern Han the amount of land under cultivation had caught up with the high during Western Han. This was helped by the fact that production of iron farm tools became cheaper due to the use of a water-powered bellows for the smelting furnace. Social production began to surpass that of Western Han, with pottery, lacquerware, handicrafts and silk noted for their quality and artistry.

Early in the Eastern Han dynasty the nomadic herding Xiongnu people beyond the northern border split into two groups - northern and southern. The Northern Xiongnu remained on the Mongolian plateau while the Southern Xiongnu gave their allegiance to Han and moved to the area along the bend of the Huanghe (Yellow) River and what is today northern Shaanxi and Shanxi provinces. The Northern Xiongnu frequently invaded the Han northern frontiers, burning towns, seizing draft animals and taking prisoners to be slaves. Towns in the Gansu Corridor had to keep their gates closed even in the daytime. The Northern Xiongnu again began to dominate the smaller nations in the "Western Regions" in what is now Xinjiang (Sinkiang) which had been subordinate The Xiongnu extorted high tribute from to Han. them and hindered Eastern Han communications. These smaller nations sent envoys to Luoyang asking for aid against the Xiongnu.

In A.D. 73 the Han government sent troops to launch an offensive against the Northern Xiongnu. The Xiongnu were defeated along the northwestern border, the Western Regions became once again part of Han territory and governors were appointed.

In A.D. 89 another offensive ended the Xiongnu threat to Eastern Han and these small nations. Ban Chao, one of ancient China's greatest diplomats, was sent as an envoy to them. In the course of 30 years he helped these peoples free themselves from control of the Xiongnu, and strengthened ties between them and the Han government.

In A.D. 97 Ban Chao sent Gan Ying as envoy to Rome, whose empire was creeping eastward across Asia Minor. He got as far as Parthia (today's Iran). Though he did not get to Rome, he gained much knowledge of geography and customs along the route he took which served as a basis for more direct contact with the west. In A.D. 166 Rome sent an envoy to China by the sea route. He brought with him ivory and other gifts for Emperor Han Huan Di. This is described in the *History of the Later Han Dynasty* as the earliest recorded direct contact between China and a European country.

In the course of such exchange with areas to the west Buddhism was introduced to China's hinterland in the last years of Western Han, and during Eastern Han times began to spread and flourish around Luoyang and in the areas between the Changjiang (Yangtze) and Huaihe rivers.

Science and Philosophy

An outstanding scientist of the Eastern Han period was Zhang Heng (78-139) who made contributions to mathematics, astronomy and calendarical calculation. He created the world's first armillary sphere which showed the movement of the sun and other celestial bodies. In A.D. 132 he invented the world's first seismoscope, which indicated when and in what direction from the capital an earthquake was taking place. From the Lingtai observatory near Luoyang, it noted an earthquake in eastern Gansu in the year 138.

Toward the end of the Eastern Han dynasty there lived a famous physician named Zhang Zhongjing (c. 150-219). Drawing on his own experience and that of his predecessors and making use of prescriptions collected from among the people, he wrote a book entitled *A Treatise on Fevers*. Containing about 400 prescriptions and various theories and principles of treatment, it laid the foundation for Chinese medicine. Zhang was venerated by later generations as the "sage physician." As one of the classics of Chinese medical literature, it is still widely read today.

A contemporary of this physician was the surgeon Hua Tuo. He traveled widely, practicing medicine in areas which are today's Jiangsu (Kiangsu), Shandong, Henan and Anhui provinces. He used acupunc-



The famous surgeon Hua Tuo.

ture and moxibustion, and is the first known in the world to use general anesthesia which aided him in performing major abdominal operations. For this he used the drug *mafeisan*, which, taken with wine, caused the patient to lose consciousness. This anesthetic was later introduced into Korea, Japan and some Arab countries in Asia and north Africa.

Hua Tuo held that the human body should have frequent exercise to enable its circulatory system to function well. He devised a set of exercises known as "Five Animals' Play" which imitated the movements of the tiger, deer, bear, monkey and birds.

Among the philosophers of Han times Wang Chong (27 - c. 97) is outstanding as a materialist thinker. He countered the ideas put forth by Prime Minister Dong Zhongshu who had revived Confucianism (see the preceding history article in the March 1979 China Reconstructs). As part of his "Will of Heaven" theory, Dong claimed Heaven showed its will to the rulers through solar and lunar eclipses, storms, rain and meteors. Wang Chong argued that these things were merely natural phenomena and had nothing to do with warnings from Heaven.

He also refuted other superstitions prevalent in his time. He said that the body rotted and became dust, that it was not possible for consciousness to exist after death and that there were no such things as spirits. Since such ideas ran into opposition from Dong Zhongshu's Confucian establishment, after working for several years as a petty official, Wang Chong devoted most of his life to teaching and writing at home. He recorded his ideas in popular language in his work Discourses Weighed in the Balance, written over a period of 30 years.

However, Wang Chong was limited by the fatalist view current in his time. This idea that nothing could be done about things helped maintain the rule of the feudal landlord class.

The Yellow Turbans

Beginning about the middle of the Eastern Han dynasty, control of the court alternated between palace eunuchs and members of the empresses' families. They enriched themselves by seizing land and houses and extorting phenomenal taxes; as usual the peasants suffered most. Bands of starving peasants roamed the countryside in search of food and, peasant uprisings became more frequent. The greatest of these began in A.D. 184, that of the Yellow Turbans, so called for the yellow headdress they adopted.

The leader of the Yellow Turbans was Zhang Jiao (?-184) of Julu county (south of today's Ningjin) in Hebei province. An epidemic spread and Zhang Jiao, having some medical knowledge, went around giving treatment and teaching a religious doctrine

Bellows like this powered by waterwheel and used with blast furnaces enabled more and cheaper iron production.



which he called the Tai Ping Dao (Way of Peace). Within a decade he had an organization numbering several hundred thousand in the valleys of the Changjiang and Huanghe rivers. He divided his followers into 36 *fang* or sections ranging in size from six of seven to ten thousand people. Their avowed aim was to overthrow the Eastern Han regime in Luoyang, and the 5th of March in the year 184 was set as the date. A month before that day a traitor in Zhang Jiao's ranks informed on them and one of his main leaders and a thousand followers in the capital were arrested and executed.

Zhang Jiao changed his plans. Messengers were hastily dispatched to local commanders and in February a series of uprisings were launched along the lower Changjiang and Huanghe rivers. They took many cities, killed oppressive officials and attacked landed estates with the support of the masses.

The main force commanded by Zhang Jiao gained control of the north bank of the Huanghe River and sent several powerful detachments against the capital. The government turned its crack troops against Zhang while armed forces of the big landlords harassed

others of his units. Zhang himself had died of illness in August and in the hands of other leaders by November the Yellow Turbans had lost their main force.

The tide of resistance, however, ran strong and the struggle was continued by other units. Some continued fighting courageously for 20 years before they were crushed by the armies of the big landlords. Though the uprising of the Yellow Turbans failed, it was a factor in bringing the Eastern Han dynasty to an end.

Some Historical Names Former Spelling New Spelling Liu Hsuan Liu Xuan Liu Hsiu Liu Xiu Hsiungnu Xiongnu Pan Chao Ban Chao Chang Heng Zhang Heng Chang Chung-ching Zhang Zhongjing Wang Chung Wang Chong

The Yellow Turbans' Army

Painting in the Museum of Chinese History

Zhang Jiao



Chang Chiao





A rammed earth wall and floor bricks on the second tier of the ruins.

The ruins of the Lingtai observatory in the southern outskirts of Luoyang.

Zhang Heng and Lingtai Observatory

LEI CONGYUN

C HINA was one of the pioneering countries in the study of astronomy and home of the earliest observatory of its size known so far to the world. It was known as Lingtai (meaning observatory) and built in A.D. 56 outside Luoyang (Loyang), capital of the Eastern Han dynasty (A.D. 25-220). It was where the famous astronomer Zhang Heng (78-139) worked. This has been ascertained only in recent years following the discovery in the winter of 1974-75 of ruins of ancient buildings which scholars have concluded are the Lingtai referred to in historical records.

From these records we know that Lingtai was a busy place in its day. It had a staff of 43, under an administrator: 14 for observing the stars, 2 for the sun, 3 for the wind, 12 for weather records, 3 for time, 7 working on making calculations for the solar periods more accurate, and a handyman. This minute division of labor is an indication of the high level of development of astronomy at the time.

Excavation shows that the Lingtai buildings covered an area 220 by 200 meters. There was a 50meter square observation platform 8 meters high and two tiers of lower-level platforms. Traces of the connecting corridors and sloping passages can still be seen, indicated by ruins of pillar bases, ashes of wooden pillars and square floor bricks. On the second tier were several rooms, one for storing astronomical instruments and others where the observers noted down and collated their materials. It is a very compact layout, and the structure must have looked magnificent from the distance. Along its east side was a north-south thoroughfare leading to Luoyang.

Lingtai continued to be used as an observatory for two and a half centuries until the early 4th century.

Inventive Scientist

All of the work at Lingtai was under the supervision of Zhang Heng, who was court high counsellor in charge of astronomy. He was twice appointed to this position which he held a total of 14 years. His theories contributed much to astronomy, and research done under him to making the calendar more precise. His two greatest inventions which have come down to us are the armillary sphere and seismoscope.

At a time when it was believed that the earth was flat and the sky a dome over it, Zhang Heng

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A reconstruction of Zhang Heng's seismoscope. When there was an earthquake a dragon dropped its ball into the frog's mouth. Portrait of Zhang Heng.



propounded the revolutionary idea that the universe was infinite in space and time. In his view the earth was like the yolk of an egg suspended in the center of the universe. Starting from the position of the stars as seen from Luoyang, he took the Polar Star as one end of an axis on which the great sphere of the sky revolved over and about the earth. Thus the sun apparently moved around the earth and this was his explanation.

Revolutionary, too, for his day was his view that the moon moved around the earth and that the moon was a non-luminous body which only reflected the sun. He stated that 2,500 stars could be seen with the naked eye from the capital at Luoyang, a number still held to by astronomers today. Of these, 320 had names, and there were 124 ever-luminous stars. His writings are *Ling Xian*, a summary of knowledge on astronomy thus far and *Hun Tian Yi Tu Zhu* (Drawings and Notes on the Armillary Sphere).

His armillary sphere, the world's first, showed with a set of bronze rings, the movement of the sun and other important celestial bodies in the course of a day. It operated automatically, powered by the flow of water in a water clock. His seismoscope consisted of a bronze urn with a diameter of 1.9 meters with a central pendulum. An earth tremor caused the pendulum to activate a set of levers which released a bronze ball held in the mouth of one of 8 dragons on the outside of the urn. Thus in Luoyang it could be known when and in what direction an earthquake had occurred. A reconstruction of Zhang Heng's seismoscope is on display in the Museum of Chinese History in Beijing (Peking). Zhang Heng was talented in many other lines. In his book *Suan Wang Lun* he gave the results of a careful study of the ratio of the circumference of a circle to its diameter and worked out the figure for what we now know as π to be 3.1622. Though this was not as accurate as the present known figure of 3.1416, it was a considerable improvement over the earlier Chinese figure of 3.

His investigation and studies in geography led him to draw a topographical map which continued in use for several centuries. He was also an inquisitive historian and one of the six great painters of his time, depicting reality as it was. As a youth he had written a number of poems which were wellknown, but most of them have been lost.

Fought Superstition

An uncompromising adherent of truth, he made bold breakthroughs in both science and the cultural fields. He presented a report to the emperor which vigorously attacked superstitions then prevalent. In the last period of his officialdom he suggested reforming the local administration, training people capable of handling it well, clarifying laws and lessening the burden of the laboring people.

In 1955 Zhang Heng and his inventions were honored on a postage stamp issued by the People's Republic of China. In 1956 Tushutai, the pavilion where he studied, and his tomb to the north in Nanyang county, Henan province, were restored as a memorial. On a monument erected there is an inscription by the late Guo Moruo (Kuo Mo-jo), President of the Chinese Academy of Sciences, which reads: "A man so gifted in so many ways is rarely found in history. He will be esteemed forever." 中文月课 LANGUAGE CORNER ZHONG WEN YUE KE

Lesson 4

Shopping

(+= +	大访华 旅游团 一位 成员	顾客:	要两个大一点的。
(加手)	大访华旅游团一位 成员 à fǎng Huá lǚyóutuán yí wèi chéngyuán	Gùkè:	Yào liǎng ge dà yìdiǎn de.
	visit China tourist group a member	C:	Want two big a bit (ones).
		售货员:	
			Zhè liǎng ge jiǔ máo èr.
qù xiǎomài go to shop (1		Silounuoyuan.	These two nine <i>jiao</i> two (<i>fen</i>).
售货员:	您好。您想买什么?	顾客: Gùkè:	バーイT ジ水 用) 山) 臼及 ハ 臼及 (Nà zhǒng lù pútao suān bù suān?
	Nín hảo. Nín xiảng mài shénme? You good. You think buy what?	C:	That kind green grapes sour not sour?
Salesperson:			
顾客:			不酸。三毛四 一斤。
Gùkè:	Mǎi shuǐguǒ.	Snounuoyuan: S:	Bù suān. Sān máo sì yì jin. Not sour. Three <i>jiao</i> four (<i>fen</i>) one <i>jin</i> .
Customer:	Buy fruit.		
售货员:			要半斤。
	Zhèli yǒu píngguǒ, júzi, xiāngjiāo, lí,	Gùkè: C:	Yào bàn jīn. Want half <i>jin</i> .
S:	Here have apples, tangerines, bananas, pears,		
	葡萄和菠萝,您 随便	售货员:	您还买别的东西吗?
	pútao hé bōluó, nín sufbiàn		Nín hái mǎi biéde dōngxi ma? You also buy other things?
	grapes and pineapples. You as you wish	S:	
×.,	挑 吧!	顾客:	
	tiāo ba!	Gùkè: C:	Yǒu qiǎokèlì ma?
	choose.		Have chocolate?
顾客:		售货员:	
Gùkè:	Júzi duōshao qián yì jīn?	Shòuhuòyuán:	
C:	Tangerines how much money one jin?	S:	
售货员:			看看。这里有好几种巧克力,
	Sì máo wǔ (fên).		kànkan. Zhèli yǒu hǎo jǐ zhǒng qiǎokèlì, (and) look. Here are several kinds chocolate.
S:	Four jiao five (fen).	2	
顾客:			您要哪一种?
Gùkè:	Xiāngjiāo ni?	0	nín yào nă yì zhǒng?
C:	Bananas?		You want which kind?
售货员:		顾客:	要大块的那一种。
	Xiāngjiāo sì máo èr (fēn). Nín yào	Gùkè:	Yào dà kuài de nà yì zhồng.
S:	Bananas four jiao two (fen). You want		
		C:	Want big piece that kind.
	几斤?	售货员:	八毛一块。
	几斤? jǐ jīn?	售货员: Shòuhuòyuán:	八毛一块。 Bā máo yí kuài.
	几斤? jǐ jin? how many jin?	售货员: Shòuhuòyuán: S:	八 毛 一 块。 Bā máo yí kuài. Eight <i>jiao</i> one piece.
顾客:	几斤? jǐ jīn?	售货员: Shòuhuòyuán: S:	八毛一块。 Bā máo yí kuài. Eight <i>jiao</i> one piece. 要两块。那是什么糖?
Gùkè:	几斤? jǐ jīn? how many jin? 我先要二斤桔子、二斤 Wó xiān yào èr jīn júzi, èr jīn	售贷员: Shòuhuòyuán: S: 顾客: Gùkè:	八毛一块。 Bā máo yí kuài. Eight <i>jiao</i> one piece. 要两块。那是什么糖? Yào liàng kuài. Nà shì shénme táng?
	几斤? jǐ jin? how many jin? 我先要二斤桔子、二斤 Wó xiān yào èr jīn júzi, èr jīn I first want two jin tangerines (and) two jin	售货员: Shòuhuòyuán: S: 顾客: Gùkè: C:	八 毛一块。 Bā máo yí kuài. Eight jiao one piece. 要 两块。那是什么糖? Yào liǎng kuài. Nà shì shénme táng? Want two pieces. That is what candy?
Gùkè:	几斤? jǐ jīn? how many jin? 我先要二斤桔子、二斤 Wó xiān yào èr jīn júzi, èr jīn	售贷员: Shòuhuòyuán: S: M 客: Gùkè: C: Gùkè: C: Gù 员:	八 毛一块。 Bā máo yí kuài. Eight jiao one piece. 要 两块。那是什么糖? Yào liǎng kuài. Nà shì shénme táng? Want two pieces. That is what candy? 那是 花生酥糖。 每 盒 两
Gùkè:	几 斤? jǐ jin? how many jin? 我先要二斤 桔子、二斤 Wó xiān yào èr jin júzi, èr jin I first want two jin tangerines (and) two jin 香蕉。那边的菠萝 怎么样? xiāngjiāo. Nabiān de bōluó zěnmeyàng?	售贷员: Shòuhuòyuán: S: M 客: Gùkè: C: 售货员; Shòuhuòyuán:	八 毛一块。 Bā máo yí kuài. Eight jiao one piece. 要 两块。那是什么糖? Yào liǎng kuài. Nà shì shénme táng? Want two pieces. That is what candy? 那是花生酥糖。 每 盒 两 Nà shì huāshēng sūtáng. Měi hé liǎng
Gùkè: C:	几 斤? jǐ jin? how many jin? 我先要二斤 桔子、二斤 Wó xiān yào èr jin júzi, èr jin I first want two jin tangerines (and) two jin 香蕉。那边的菠萝 怎么样? xiāngjiāo. Nabiān de bōluó zēnmeyang? bananas. Over there pineapples (are) how?	售贷员: Shòuhuòyuán: S: M 客: Gùkè: C: Gùkè: C: Gù 员:	八 毛一块。 Bā máo yí kuài. Eight jiao one piece. 要 两块。那是什么糖? Yào liǎng kuài. Nà shì shénme táng? Want two pieces. That is what candy? 那是 花生酥糖。 每 盒 两 Nà shì huāshēng sūtáng. Měi hé liǎng That is peanut crisp candy. Each box two
Gùkè: C: 售贷员:	几 斤? ji jin? how many jin? 我先要二斤 桔子、二斤 Wó xiān yào èr jīn júzi, èr jīn I first want two jin tangerines (and) two jin 香蕉。那边的菠萝 怎么样? xiāngjiāo. Nàbiān de bōluó zěnneyàng? bananas. Over there pineapples (are) how? 味道 很好,又甜又香。您	售贷员: Shòuhuòyuán: S: M 客: Gùkè: C: 售货员; Shòuhuòyuán:	八 毛一块。 Bā máo yí kuài. Eight jiao one piece. 要 两块。那是什么糖? Yào liǎng kuài. Nà shì shénme táng? Want two pieces. That is what candy? 那是花生酥糖。 每 盒 两 Nà shì huāshēng sūtáng. Měi hé liǎng
Gùkè: C: 售贷员: Shòubuòyuán:	几 斤? jǐ jin? how many jin? 我先要二斤 桔子、二斤 Wó xiān yào èr jīn júzi, èr jīn I first want two jin tangerines (and) two jin 香蕉。那边的菠萝 怎么样? xiāngjiāo. Nàbiān de bōluó zěnmeyàng? bananas. Over there pineapples (are) how? 味道 很好,又甜又香。您 Wèidào hěn hào, yòu tián yòu xiāng. Nín	售贷员: Shòuhuòyuán: S: M 客: Gùkè: C: 售货员; Shòuhuòyuán:	八 毛一块。 Bā máo yí kuài. Eight jiao one piece. 要 两块。那是什么糖? Yào liǎng kuài. Nà shi shénme táng? Want two pieces. That is what candy? 那是 花生酥糖。 每 盒 两 Nà shì huāshēng sūtáng. Měi hé liǎng That is peanut crisp candy. Each box two 块 二。 kuài èr.
Gùkè: C: 售贷员:	几 斤? jǐ jin? how many jin? 我先要二斤 桔子、二斤 Wó xiān yào èr jīn júzi, èr jīn I first want two jin tangerines (and) two jin 香蕉。那边的菠萝 怎么样? xiāngjiāo. Nàbiān de bōluó zěnmeyàng? bananas. Over there pineapples (are) how? 味道 很好,又甜又香。您 Wèidào hěn hǎo, yòu tián yòu xiāng. Nín Taste (is) very good, sweet and fragrant. You	售货员: Shòuhuòyuán: S: Gùkè: C: 售货员: Shòuhuòyuán: S:	八 毛一块。 Bā máo yí kuài. Eight jiao one piece. 要 两块。那是什么糖? Yào liàng kuài. Nà shì shénme táng? Want two pieces. That is what candy? 那是 花生酥糖。 每 盒 两 Nà shì huāshēng sūtáng. Měi hé liǎng That is peanut crisp candy. Each box two 块 二。 kuài ér. yuan two (jiao).
Gùkè: C: 售贷员: Shòubuòyuán:	几 斤? jǐ jin? how many jin? 我先要二斤 桔子、二斤 Wó xiān yào èr jin júzi, èr jin I first want two jin tangerines (and) two jin 香蕉。那边的菠萝 怎么样? xiāngjiāo. Nàbiān de bōluó zėnmeyàng? bananas. Over there pineapples (are) how? 味道 很好, 又甜 又香。您 Wèidào hěn hào, yòu tián yòu xiāng. Nín Taste (is) very good, sweet and fragrant. You 要 几 个?	售於uhudyuán: S: Gukè: C: Shouhudyuán: S: M M Shouhudyuán: S: Shouhudyuán: S: Stouhudyuán:	八 毛 一 块。 Bā máo yí kuài. Eight jiao one piece. 要 两 块。那 是 什 么 糖? Yào liǎng kuài. Nà shì shénme táng? Want two pieces. That is what candy? 那 是 花生 酥糖。 每 盒 两 Nà shì huāshēng sūtáng. Měi hé liǎng That is peanut crisp candy. Each box two 块 二。 kuài ér. yuan two (jiao). 包 装 很 好看。
Gùkè: C: 售贷员: Shòubuòyuán:	几 斤? jǐ jin? how many jin? 我先要二斤 桔子、二斤 Wó xiān yào èr jīn júzi, èr jīn I first want two jin tangerines (and) two jin 香蕉。那边的菠萝 怎么样? xiāngjiāo. Nàbiān de bōluó zěnmeyàng? bananas. Over there pineapples (are) how? 味道 很好,又甜又香。您 Wèidào hěn hǎo, yòu tián yòu xiāng. Nín Taste (is) very good, sweet and fragrant. You	售货员: Shouhudyuán: S: Guké: C: 售员: Shouhudyuán: S: Mguké:	八 毛 一 块。 Bā máo yí kuài. Eight jiao one piece. 要 两 块。那 是 什 么 糖? Yào liǎng kuài. Nà shì shénme táng? Want two pieces. That is what candy? 那是 花生 酥糖。 每 盒 两 Nà shì huāshēng sūtáng. Měi hé liǎng That is peanut crisp candy. Each box two 块 二。 kuài èr. yuan two (jiao). 包装 很 好看。 Bāozhuāng hěn hǎokàn.
Gùkè: C: 售贷员: Shòubuòyuán:	几 斤? jǐ jin? how many jin? 我先要二斤 桔子、二斤 Wó xiān yào èr jin júzi, èr jin I first want two jin tangerines (and) two jin 香蕉。那边的菠萝 怎么样? xiāngjiāo. Nàbiān de bōluó zėnmeyàng? bananas. Over there pineapples (are) how? 味道 很好, 又甜 又香。您 Wèidào hěn hào, yòu tián yòu xiāng. Nín Taste (is) very good, sweet and fragrant. You 要 几 个?	售於uhudyuán: S: Gukè: C: Shouhudyuán: S: M M Shouhudyuán: S: Shouhudyuán: S: Stouhudyuán:	八 毛 一 块。 Bā máo yí kuài. Eight jiao one piece. 要 两 块。那 是 什 么 糖? Yào liǎng kuài. Nà shì shénme táng? Want two pieces. That is what candy? 那 是 花生 酥糖。 每 盒 两 Nà shì huāshēng sūtáng. Měi hé liǎng That is peanut crisp candy. Each box two 块 二。 kuài ér. yuan two (jiao). 包 装 很 好看。

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售货员:很多外国朋友都 吃, 喜欢 Shòuhuòyuán: Hěn duō wàiguó péngyou dōu xĭhuan chi, foreign friends all like (to) eat (it), S: Many 买 尝尝 盒 吧! măi yì hé chángchang ba! buy a box (to) try. 顾 客: 好。 Gùkè: Hǎo. C: All right. 售货员:还 要 吗? 别的 Shòuhuòyuán: Hái yào bié**d**e ma? (Do you) still want other (things)? S: 顾 客: 不 要了。谢谢。 Gùkè: Bú yào le, Xièxiè. C: Don't want. Thanks. 售货员:一共 六块六毛三。 Shòuhuòyuán: Yígòng liù kuài liù máo sān. S: Altogether six yuan six jiao three (fen). 客:这是 顾 七 块 钱。 Gùkè: Zhè shì qī kuài gián. C: This is seven yuan money. 售货员:找 您三毛七。 再见! Shòuhuòyuán: Zhǎo nín sãn máo qI. Zàijiàn! S: Change (for) you three jiao seven (fen). Good-bye. 顾 客: 再见! Gùkè: Zàijiàn! C:Good-bye.

Translation

(A member of the Canadian China tour group goes to a shop to buy things.)

Salesperson: How do you do? What would you like to buy? Customer: I want some fruit.

- S: We have apples, tangerines, bananas, pears, grapes and pineapples. You can choose freely.
- C: How much are the tangerines per jin?
- S: Four *jiao* and five (*fen*).
- C: How about the bananas?
- S: Four jiao and two (fen). How many jin do you want?
- C: I first want two *jin* of tangerines and two *jin* of bananas. How are those pineapples over there?
- S: Very good, sweet and fragrant. How many do you want?
- C: I want two rather large ones.
- S: These two cost nine jiao and two (fen).
- C: Is that kind of green grapes sour?
- S: They're not sour. Three jiao and four (fen) per jin.
- C: I want half a jin.
- S: Do you want to buy anything else?
- C: Do you have chocolate?
- S: Yes, please come over to this part of the counter and take a look. Here are several kinds of chocolate. Which kind do you want?
- C: I want that big kind.
- S: Eight jiao each.
- C: I want two. What kind of candy-is that?
- S: It's crisp candy with peanut filling. Two yuan two *jiao* a box.

C: The package is quite good-looking.

S: Many foreign friends like it. Buy a box and try it.

C: All right. S: Do you want anything else?

- C: No. Thanks.
- S: Altogether six yuan six jiao and three (fen).

C: Here is seven yuan.

- S: Here's your change: three jiao and seven (fen). Good-bye,
- C: Good bye.

Notes

1. One $jin - F_{T}$ is equal to 1.1 pounds or 500 grams.

2. Numbers. In Lesson 1 we learned the numbers from one to ten. The decimal system is used. Counting units are: shi + (ten), $b\check{a}i \equiv (hundred)$, $qi\bar{a}n \neq (thousand)$, wàn π (ten thousand).

85 is read bāshí wǔ 八十五 (eighty-five).

217 is read **èrbǎi yīshí qī** 二百一十七 (two hundred and seventeen).

3,921 is read sānqiān jiùbǎi èrshí yī 三千九百 二十一 (three thousand nine hundred and twentyone).

64,357 is read liùwàn sìqiān sānbǎi wǔshí qī 六万四千三百五十七 (sixty-four thousand three hundred and fifty-seven).

When saying telephone or room numbers, the decimal units (ten, hundred, thousand, etc.) are omitted. For Room 217 say **èryiqi** ニーモ (two one seven), for the telephone number 89.1965 say **bājiǔ yījiǔliùwǔ** ハ九ー九六五 (eight nine one nine six five).

3. Units of currency. China's currency is the rénmínbì 人民币 (people's currency). Its unit is the yuan 元. One yuan equals ten *jiao* 角. One *jiao* equals ten *fen* 分. In speaking, however, the colloquial máo 毛 is used instead of **jiǎo**, and **kuài** (literally, "piece") for yuan 元. We often say **kuài qián** (pieces of money).

- 1.00元 yì yuán or yí kuài qián 一元或一块钱
 - 1.00元 yl yuan or yl kual qian 一元或一块线 one yuan
- 0.50元 wǔ máo 五毛 five *jiao*
- 0.08元 bā fēn 八分 eight fen
- 1.58元 yí kuài wǔ máo bā fēn 一块五毛八分 one yuan five *jiao* and eight *fen*.
- 25.46元 èr shí wǔ kuài sì máo liù fēn 二十五元四毛六分

twenty five yuan four *jiao* and *six fen* The final unit of currency is often omitted. For example, 1.58 元 is spoken as yí kuài wǔ máo bā 一块五毛八 (one yuan five *jiao* and eight *fen*).

CHINA RECONSTRUCTS



