

China Reconstructs

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- *Women's Volleyball World Champions*
- **POPULATION AND DEVELOPMENT**

• **Rural Childcare**





Eagle Painted by Huang Zhou

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Back: Tri-color glazed figurines of the Tang dynasty	

Articles of the Month

Population Conference p. 24

Asian parliamentarians and experts meet in Beijing. Interviews with delegates from five countries: a Chinese delegate explores in depth China's current situation, its causes and implications and successful efforts to curb growth.



World Champion Women Volleyballers p. 15

Introducing members of the team that won China's first world cup in a 'big ball' sport (football, basketball, volleyball).

Rural Maternity and Child Care p. 18

New prosperity, changing attitudes and good leadership in Yantai prefecture, Shandong province, have considerably upgraded maternal-infant health care and early childhood education.

Edgar Snow and China p. 12

Commemorating the tenth anniversary of Edgar Snow's death, a Chinese translator of 'Red Star Over China' recalls the book's influence in China and internationally.



Needed Water for Tianjin p. 6



When one of China's major industrial cities faced a serious crisis, hundreds of thousands of people and government bodies at all levels were mobilized to provide short- and long-term solutions.

Through the Ages in Xi'an p. 49

In and around this single city, one can trace the development of Chinese culture from earliest man through some of her most illustrious dynasties.



To Reunify China

WE now resume a column that, some years ago, served as a regular channel of communication between our editors and our readers on topics ranging from major public issues to very everyday things.

Last November we distributed as an insert the nine important proposals for the reunification of China through the return of Taiwan to the mother country made by Chairman Ye Jianying of the Standing Committee of the National People's Congress. What has happened since? From this side of the water, there have been many steps:

An official invitation has been extended to Chiang Ching-kuo, head of the Taiwan administration, to Madame Chiang Kai-shek and other Kuomintang notables, to come to the mainland for talks, or to visit their native places, kin and ancestral graves.

Several ministries have announced plans for resuming shipping, mail, and telecommunication links and re-opening trade (including preferential prices for coal and oil supplied to Taiwan) as well as for investment opportunities. The national civil airline has projected flight schedules to Taiwan and extended emergency landing rights to Taiwan planes. The Chinese Red Cross is arranging to help contact and reunite long separated families. The All-China Federation of Trade Unions offers accommodations for Taiwan workers. Travel agencies will arrange tours. Recent appointments to the People's Political Consultative Conference include a number of pre-liberation high officeholders in the Kuomintang.

Response from the Taiwan authorities has so far been negative or absent. However, rallying to the proposals, former Kuomintang general Li Mu-an has visited the mainland and noted editor and author Prof. Ma Bi, among others, has moved here. Some public and media personalities in Taiwan have risked urging contacts and negotiations. More ask: Since all Chinese want the country united, why not talk now?

WE ourselves, as a magazine established and led by the late Soong Ching Ling, hope that talks will come soon. We have reported patriotic actions for reunification. Our Chinese edition is helping to re-establish ties between separated families, and has succeeded with more than twenty.

Soong Ching Ling was the wife, helper and inheritor of the spirit of Sun Yat-sen, who not only founded and led the Kuomintang but, responding to the Chinese Communist Party's initiative, enthusiastically promoted the first cooperation between the Kuomintang and the Communist Party, which moved China forward in 1924-1927. The second Communist-proposed period of cooperation between the two par-

ties, which Soong Ching Ling helped to advance, helped China retain its nationhood against Japanese invasion in 1937-45. Now is the time for a third co-operation, for the historic task of peaceful reunification.

THE nine points, widely recognized as reasonable and conciliatory both at home and abroad, were announced last September 30, just prior to the 70th anniversary of the 1911 Revolution which under Sun Yat-sen's leadership overthrew the 2,000-year-old Chinese feudal monarchy and set up the first Chinese Republic. On both the mainland and Taiwan this revolution is seen as a crucial watershed.

Chairman Ye's proposals include:

Early reunification talks on a reciprocal basis between the Communist Party and the Kuomintang.

Postal, shipping and trade services; reunion of families; tourist, cultural, academic and athletic exchanges.

After reunification, Taiwan to be a special administrative region with autonomy including retention of armed forces, and no central interference in local matters. Taiwan's social and economic system, way of life and economic and cultural relations with foreign countries can remain unchanged — with no encroachment on lawful possession or on inheritance of private property, houses, land, enterprises or foreign investments. Official and representative personages in Taiwan are to be given leading posts in national political bodies. People from Taiwan desiring to settle on the mainland are ensured proper arrangements, non-discrimination and freedom of entry and exit. Businessmen from Taiwan will be free to invest and operate enterprises on the mainland with lawful rights, interests and profits guaranteed.

It would be advantageous — with no risk — for Taiwan authorities to begin discussions on these moderate terms. And no foreign government can gain by obstructing history's trend or hindering talks among Chinese on matters that are theirs alone to settle. China has made it unmistakably clear by her cautions against U.S. arms sales to Taiwan that she will not trade her sovereignty for any external consideration, and any "two Chinas" scheme cannot leave her relation with countries that take to this course unaffected. But countries that respect China's sovereignty or help peaceful reunification will preserve and deepen their friendship with nearly a quarter of mankind.

That there is only one China, and that its ultimate reunification must come, is recognized on both sides of the Taiwan Strait, and internationally. These proposals, we think, provide a good opening. Important not only to all Chinese but also to peace in the Pacific and the world, they conform to majority interests and feelings and represent the direction events are bound to take, though the course may be gradual and difficult. To smooth and speed the process, they deserve general understanding and support. □

Taiwan Links



Members of the Chinese team and the Chinese Taipei team shake hands before the November 1981 19th World Women's Tennis Team Championship in Tokyo.



Seamen from China's mainland working on the West German freighter "Josef Roth" were given a warm welcome by their Taiwan compatriots when their ship called at Jilong Harbor in northern Taiwan in March 1980. At the invitation of the Jilong branch of the Taiwan Seamen's Association, they went ashore to visit Taipei. Fang Lifen (right), chairman of the Jilong branch was photographed with a mainland seaman on the freighter.



Feng Qiyong from the mainland (right) and Pan Chongui from Taiwan exchange views on the famous Chinese classical novel "A Dream of Red Mansions" on which they are both experts, at the first international symposium on the book held in June 1980 at Madison, Wis. in the U.S.



Deng Yunkuai (first left) and Lin Qingping (in back), young Taiwan compatriots now living in the U.S. in 1980 visited Beijing, where they happily met Jiang Jianchun (second right) from Taiwan now living in that city.



On September 30, 1980 'Lianhe Bao' (Union Gazette) published in Taiwan carried a picture of Ge Xiaobao, a Taiwan movie star greeting his mother in Hongkong after a 31-year separation. She and her daughter went there from Nanjing to meet him.



On Soong Ching Ling

The *China Reconstructs* articles and special pamphlet in memory of Soong Ching Ling were wonderful to have, and I congratulate you for getting them all together. It made me feel that I truly knew her, although our friendship was really through my father, General Joseph W. Stilwell, and my sister Alison and I did so only in 1976. But what a warm and loving person she was! She made us feel that we were lifelong friends, too!

NANCY STILWELL EASTERBROOK
Carmel, Ca., U.S.A.

Positive Change; Wants More on Education

May I commend your invaluable work in bringing your magazine up to international standards? I have been a subscriber for the last half decade and have seen a gradual but positive change in its contents from the days of the gang of four to the present.

As a postgraduate student in education, may I suggest you to talk more about the educational system in China and to what extent it has brought about a new social orientation in China?

STEPHEN ISABIRYE
Kampala, Uganda

Self-Evaluation

The article "Summing Up: Mao Zedong, Cultural Revolution, 32 Years of New China" in your October 1981 issue, as a whole, is wonderful. It is a fine example of honest self-evaluation. In every article throughout this issue shortcomings are mentioned together with positive achievements. In the article I have mentioned it is obvious that a great deal of effort was made to achieve a balance that will be useful in improving future work. Mao, as well as China as a whole was examined. Lastly, it was done in language that everyone can understand.

On pages 36 and 37 you carry graphs of industrial output comparing 1949 to 1980. I am tired of only this comparison. It is not entirely honest because it doesn't show the steady growth, and possibly decreases, in production during the cultural revolution. It would be much more useful to see annual growth. Why not show a bar graph with the production in 1949, then 1955, then 1960, 1965, 1970, 1975 and current levels? This would be more informative.

KENNETH ALLEN
Prince Georges, Md., U.S.A.

Warm Greetings

On the occasion of the 32nd anniversary of the victory of the Chinese revolution, please allow me to extend to you, the People's Republic of China and her people my warmest greetings.

In the past 32 years the industrious and ingenious Chinese people, under the leadership of the Chinese Communist Party and with the support of the world's people, have made great achievements.

The successes the Chinese people have achieved in the political, social, economic and cultural fields not only consolidate the fruits of your revolution, but also heighten the international prestige of your country.

I wish you and the Chinese people still greater successes in building socialism.

AMERICO ESPINOZA G.
Ejido, Venezuela

Honest Approach

Although not a subscriber I have been reading *China Reconstructs* for the last five years. Fortunately my field of university studies is related to China, so I have found the magazine an invaluable source of information. In recent years I have noticed considerable change in the format and structure of the magazine. It has become more compact and readable. However, most importantly, there appears to be a far more honest approach to the material written about, an honesty apparent in criticisms of mistakes and in treating the weaknesses in the economy. I find this trend very refreshing and gratifying. It no longer reveals the parrot methods of the media in the years of the gang of four. Credibility has returned to China!

PHILIP A. MCWHINNEY
Nathan, Australia

Writing about Lu Xun

I have read with great interest the articles in the August 1981 issue of your magazine concerning the centenary of Lu Xun, and sincerely hope that the festivities and publications connected with this event will help to spread his reputation around the world, as well as consolidating his position in the pantheon of Chinese literature.

For the past five years, I have been doing research into the life and work of Lu Xun, with the ultimate aim of writing an English-language biography of him suitable for readers who do not have a profound knowledge of Chinese history or literature.

I expect to be working on *Lu Xun and the Birth of Modern China* (as the book will be called) for another three years. He was, as you know, an ex-

tremely prolific author, so the amount of research is tremendous! I would be extremely grateful if any reader who has particularly interesting material relating to Lu Xun's life and work would share it with me.

JONATHAN FRYER
Bruxelles, Belgium

Thinks Politics Excessive

I think your magazine clearly sums up the way of life in China. I believe people would like to have more pictures in color of some of your famous monuments and scenic spots.

But there are too many articles about politics. There should be a wider variety, including articles for every age group. I like the Chinese in the back of the magazine but of course find pronouncing it very difficult.

Once again I would like to thank you very much for your magazine. It is very much appreciated.

L. LAVELL
Bognor Regis, U.K.

Youth Cooperatives; and Some Questions

I would like to say that I read every article of your magazine line by line. The article "Jobless Youth Start Small Businesses" in your October issue interested me most. Please tell us more about the life of various types of people: middle school and college students, factory workers, office workers, artists, etc. What is their family life like? What are their working conditions? How do the city people and villagers spend their Sundays and holidays? How is life for retired people or widows?

WALTER SCHLEH
Köln, Federal Republic of Germany

Asks for More Even Approach

Your magazine is excellent and covers a wide range of topics. It certainly gives foreign friends a better overall picture of China's progress and achievements.

Yet, one defect is that the articles are always about progress — seldom do you mention setbacks. In future editions I hope you will give a more even approach about developments in China. This will give readers a better understanding of the rate of progress and perhaps attract more readers.

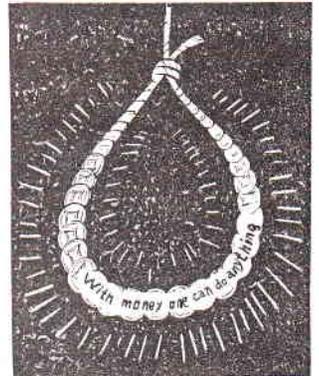
Finally, please print a few more articles and colored pictures about children, their time spent in schools, with their families and what they do during leisure time.

ONG CHIN BEE
San Francisco, Ca., U.S.A.

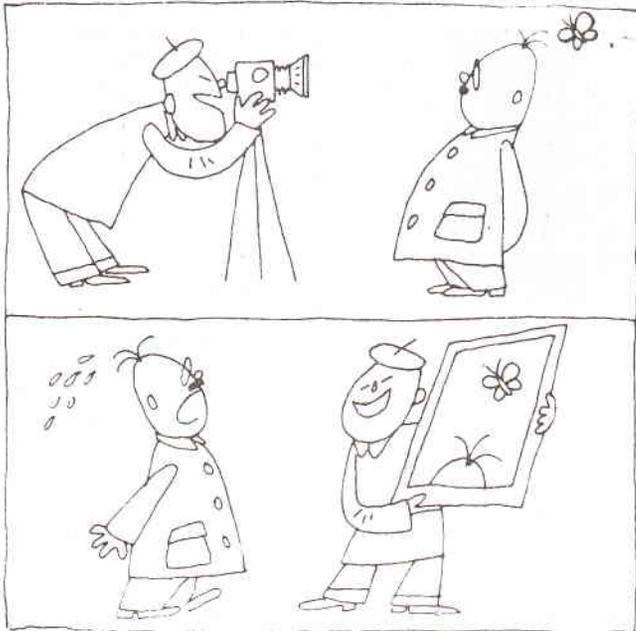


Like father, like son.
Xu Jingkai

Gold necklace — or noose?
Cao Kaixiang



Helping the shoots to grow by pulling them upward.
Liu Yong



How do you like my composition?
Sun Zeliang

Revealing outfit.
Gao Shidu



Tianjin—the City that Needed Water

DENG SHULIN

FOR some time Tianjin, a city of 7 million, has suffered from a chronic water shortage. The problem reached crisis proportions in the summer of 1981, with water for daily use rationed to .075 cubic meters per person and many industries forced to slow or even suspend operations.

But Tianjin is one of China's major manufacturing and commercial centers; industrial output value constitutes 4 percent of the country's total. So Tianjin's problems have a strong impact on the national economy, the drive for modernization, and ultimately the welfare of the entire Chinese peo-

ple. National funds have been allocated and hundreds of thousands of people in Tianjin and elsewhere mobilized, for the effort was not just to alleviate the immediate crisis, but to solve the water shortage once and for all.

Why No Water?

At Tianjin, 137 kilometers southeast of Beijing, the Haihe River is joined by its tributaries and flows into the Bohai Sea. The river is of course the city's natural water source, but for three main reasons this has not been sufficient.

First, the lower reaches of the rivers around Tianjin have for years been receiving less and less water because so much has been diverted and stored in the upper reaches. At one time floods used to be a major problem there. After liberation, and especially since 1957, a number of dams and reservoirs were built. Water was diverted for irrigation, and as the area under irrigation—and industrial development in the city—continued to grow, water need increased greatly. Even in flood seasons Tianjin's water supply was low. In dry seasons, water slowed to such a trickle that shiplocks on the Haihe River had to be closed to prevent salt water from the Bohai Sea from backing up into the river.

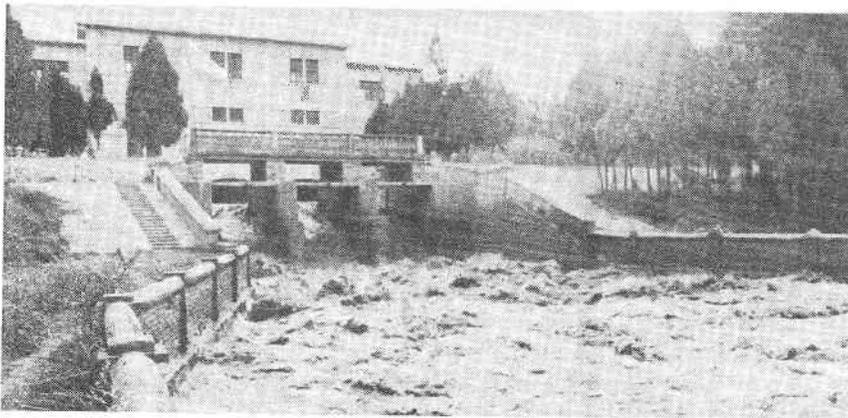
Second, the city's own need for water increased rapidly with the development of industries. In 1949 total industrial output value was 650 million yuan and population was 1,890,000. In 1980 output value had reached 19,390 million yuan and population 3,500,000. Both the city's 4,000 factories and the increasing number of inhabitants needed more water.

Third, in the past two or three years there has been little rainfall in the upper reaches of the rivers. In 1981 north China suffered its worst drought in a century. The two main reservoirs supplying Tianjin ran dry and reservoirs upriver were very low. Beijing's Miyun Reservoir, which had previously supplied water to Tianjin, had none to spare.

Moreover underground water is in short supply because overuse over the past few decades has resulted in the lowering of the water table and dangerous ground sinkage. Any further attempt to tap underground supplies would only

Water from the Huanghe River, diverted to Tianjin to solve the immediate crisis, flows through the People's Victory Canal.

Wang Yousheng



Workers in Wucheng county, Shandong province, open up the Zhangweixin Canal to bring Huanghe River water to Tianjin.

Wang Yousheng



DENG SHULIN is a staff reporter for China Reconstructs.

CHINA RECONSTRUCTS

cause more sinking and lead to more problems than it would solve.

Conserving Water

Bringing water over long distances to supply a city the size of Tianjin is no easy task. In their intensive planning efforts, the national government and local officials concentrated on two major goals—finding new sources of supply and reducing water usage within the city.

About half of the city's total water consumption is for industrial use, and here the elimination of waste can greatly reduce overall needs. City authorities have called upon local enterprises to find new ways of saving water, and the response has been good.

Cooling systems account for 40 percent of the water used daily by industries. A number of plants have now adopted methods of recycling all the water in such systems or of using sea water instead of fresh where conditions permit. Some plants have overhauled their boilers and pipelines to insure against water loss and found different ways of recovering water once wasted.

The Beining Paper Mill is one of many plants which have shown what can be accomplished by earnest effort. Through careful review of its procedures and the



Premier Zhao Ziyang (2nd right, front row) inspects the new Panjiakou Reservoir.
Wang Menglin

adoption of new technology, it has cut its water needs from 120 tons to 10 tons daily.

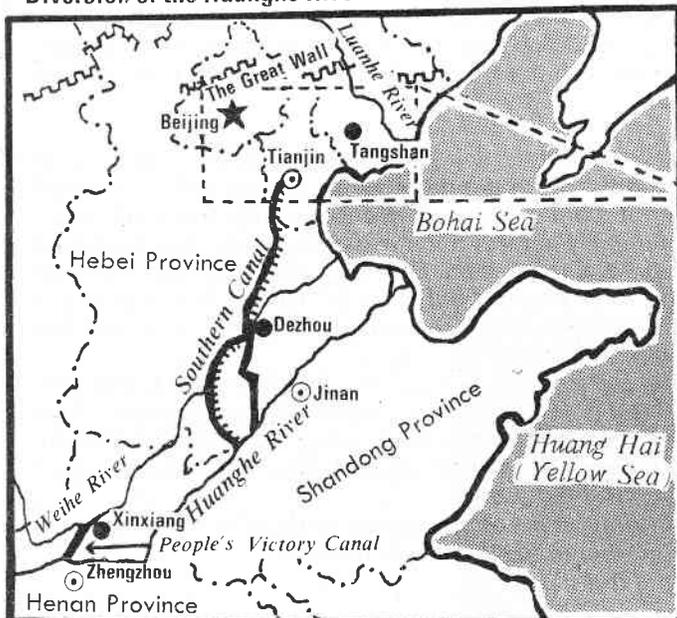
Short-Term Answers

In August 1981 the national government, as part of the overall plan for solving Tianjin's water shortage, decided to divert water from the Huanghe (Yellow River) as an emergency measure until long-term projects could be completed. The Huanghe, China's sec-

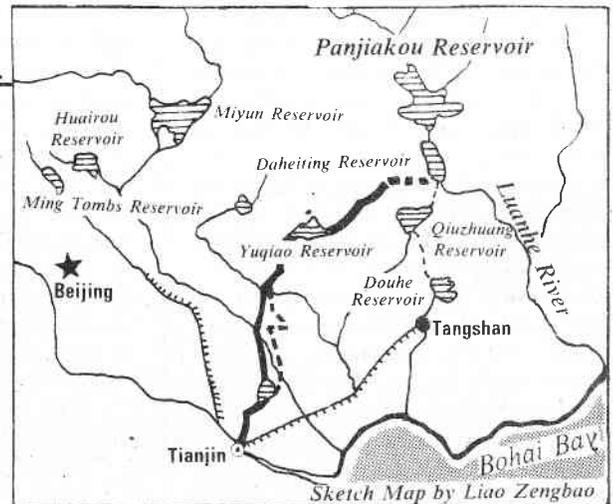
ond largest river, empties into the Bohai Sea south of Tianjin.

Twice before—in 1972 and between 1975 and 1976—the river's water had been diverted to the city. But the present diversion would be on a much larger scale—some 600 million cubic meters of water at one time, about the equivalent of the total volume moved in the three previous years. Waterways have to be dredged, dams and dikes reinforced, and several hundred waterlocks, culverts,

Diversion of the Huanghe River from Henan and Shandong



Panjiakou Reservoir and Diversion of the Luanhe River





Tianjin municipal leaders trace the route of the new waterway system that will bring in Luanhe River water, thus solving the city's shortage on a long-term basis. *Li Fen*

aqueducts and bridges built. The State Council (the executive organ of the National People's Congress) allocated 160 million yuan for the project and appointed a special group to lead the work.

The diverted water would reach Tianjin through three different routes (see map.) The first and longest was through Zhengzhou in Henan province to the Xinxiang People's Victory Canal, and thence by means of the Weihe River and two other canals to Tianjin, for a total distance of 850 kilometers.

The other two routes — covering distances of 600 and 480 kilometers — both originate just southwest of Jinan, capital of Shandong province.

These waterways were built to irrigate farmland, and the diversions had to take place during the winter season when silt deposits were low. But this coincided in part with the period when commune members normally irrigate newly sown wheat that would be harvested the following spring. Local governments in Henan, Hebei and Shandong provinces, after consultation, agreed that water

would not be siphoned off for irrigation while the diversion was taking place. It would be more difficult, but in most places underground water could be used for irrigation instead of river water.

Local authorities also took the lead in explaining the situation to commune members. Supplying water to Tianjin was vital not just because the people there needed it; the city's role in the economy meant that its well-being affected

the lives of all Chinese — including the commune members themselves. Once this was understood, cooperation was widespread. In Shandong province, some 400,000 people took part in the public work of excavation, dredging and construction.

Immediate Crisis Solved

On October 14, 1981, after preparations that involved among

Reservoir by the Great Wall

THE Panjiakou water control project along the ancient Great Wall, 189 kilometers northeast of Beijing, is China's third largest of its kind after the Gezhouba on the Changjiang (Yangtze) River and Danjiangkou on the Hanshui. It consists of a large dam, power station, reservoir and two smaller auxiliary earth dams. The dam's maximum height is 107.5 meters, about equivalent to a 35-story building, and along its 1,040-meter-long top two automobiles can be driven side by side.

Panjiakou harnesses the Luanhe, one of the great rivers of northern China, which flows from north to south through the Panjiakou gap. The river carries an average annual volume of 4,600 million cubic meters of water. But rainfall in the area is very irregular; the heavy rains of July, August and September make up 60-80 percent of the precipitation for the whole year. At high-water seasons, the river flooded local areas, while at other seasons not enough water was available for irrigation and other uses.

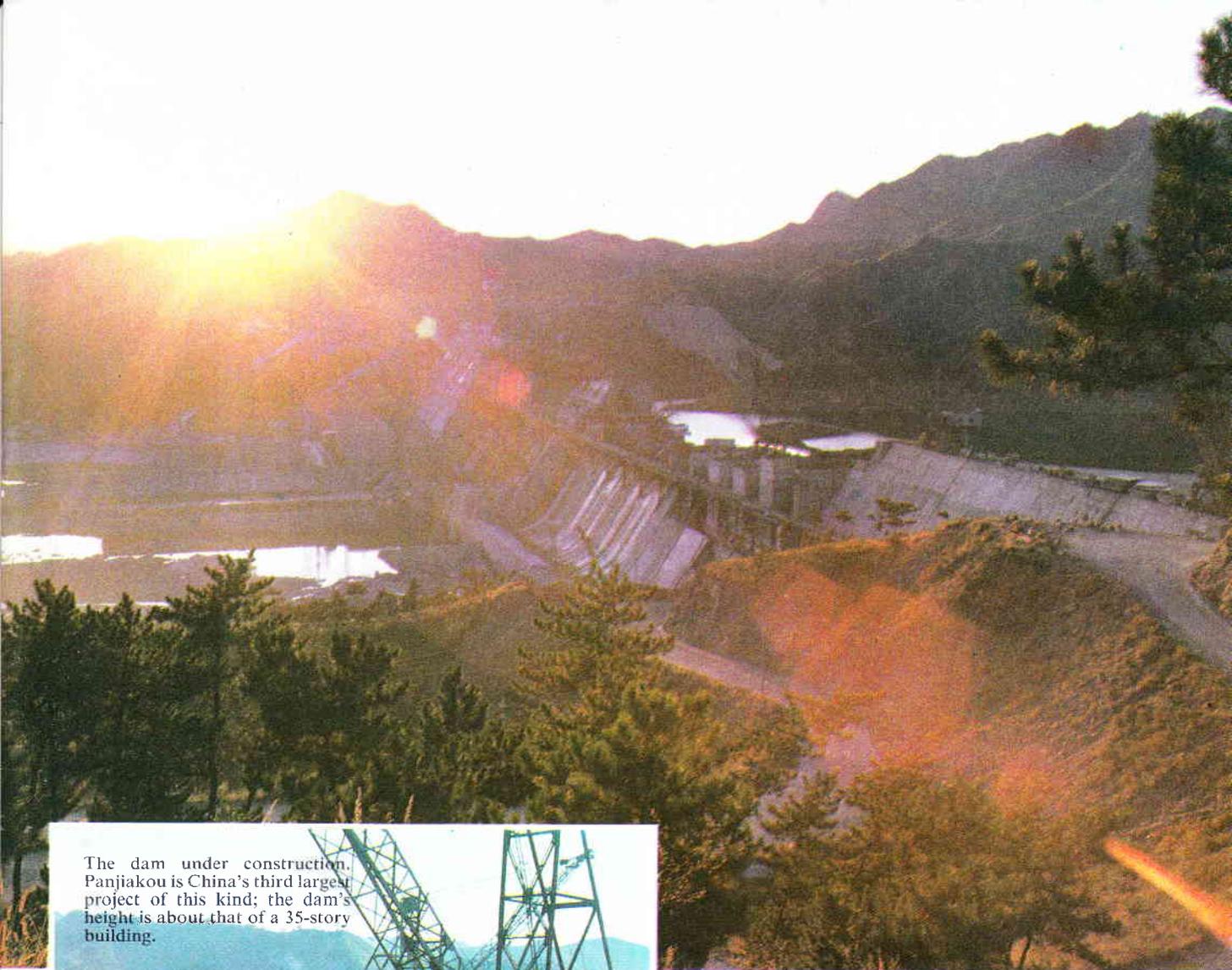
The new project will control floods, generate power, and make water available when it is needed throughout the year. It will put under control 75 percent of the river's drainage basin and over 50 percent of its total flow.

To the right of the dam is a power house equipped with four sets of generators with a total capacity of 450,000 kw. One 150,000 kw. set is already in operation, and the remaining three pump-storage sets are soon to be installed. Average annual power output will be 638 million kwh.

THE reservoir, which is now basically completed, has a total storage capacity of 2,930 million cubic meters and a standard usable capacity of about 1,950 million cubic meters. In 1962, when floodwaters inundated surrounding areas, river flow was measured at 18,800 cubic meters per second. Diverting water into the reservoir will reduce the maximum rate of flow to 10,000 cubic meters per second, thus ensuring the safety of villages along the river and the nearby Beijing-Shanhaiguan Railway.

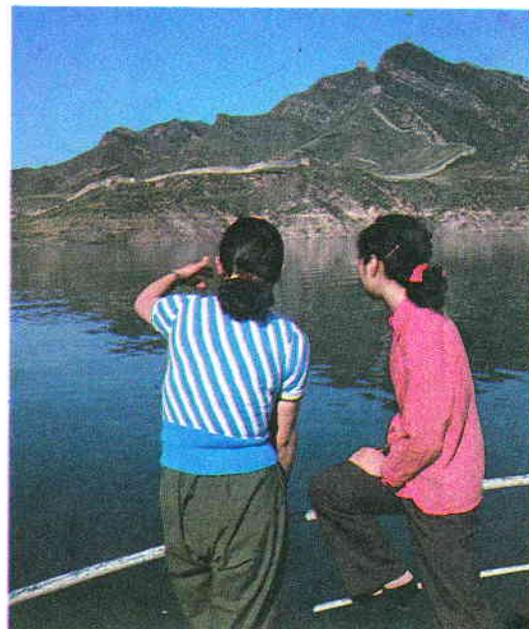
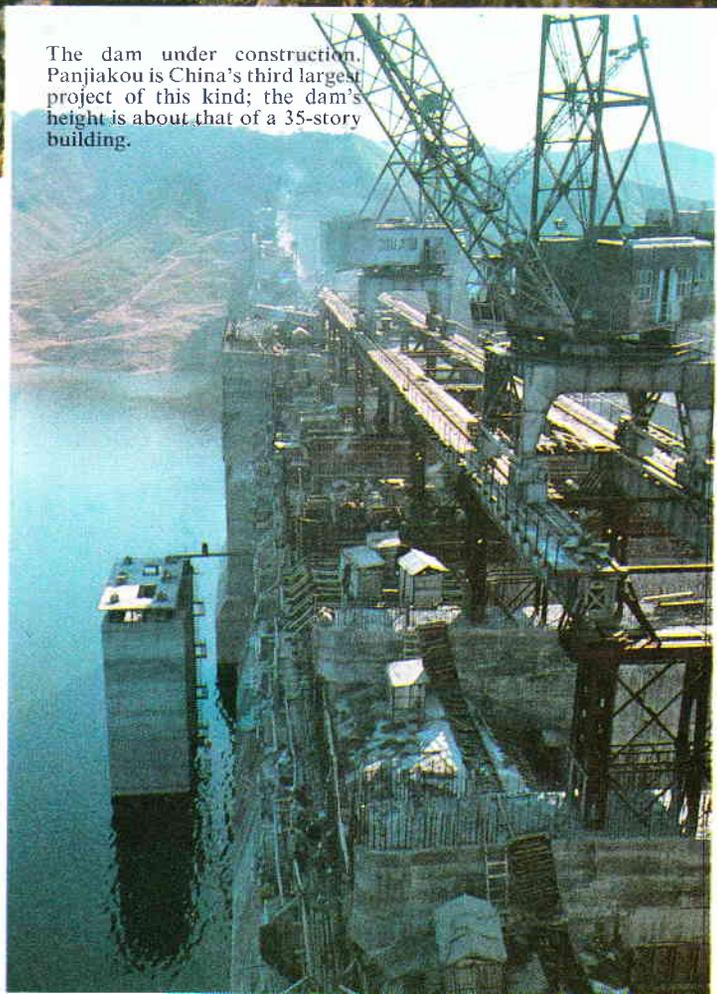
An engineering unit of the People's Liberation Army was sent to build the reservoir in an effort to accelerate construction. Part of the urgency stemmed from serious water shortages in Tianjin, Tangshan and other areas which are scheduled to receive water from Panjiakou.

The entire project, when completed, will be a major part of China's water control and hydropower network. □



The dam under construction. Panjiakou is China's third largest project of this kind; the dam's height is about that of a 35-story building.

Sunrise over Panjiakou.



Ancient and modern engineering feats: the Great Wall overlooks Panjiakou Reservoir.



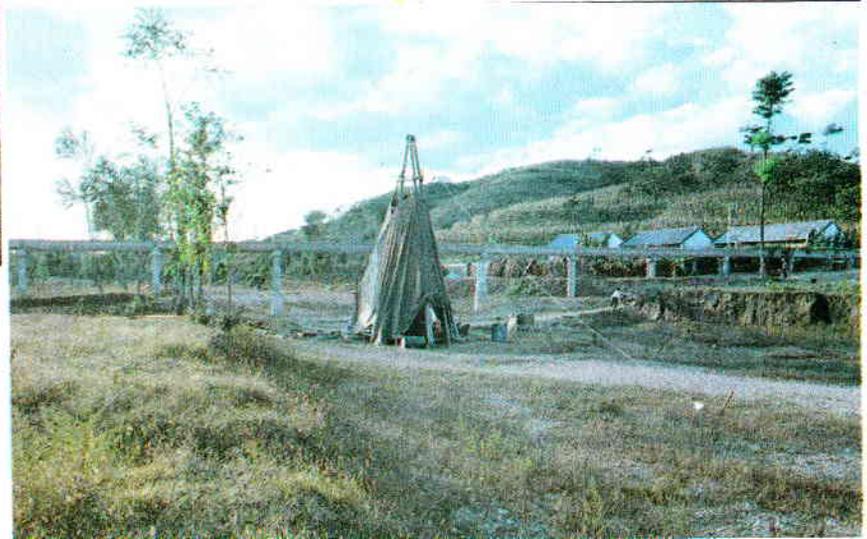
Measuring the water table along the canal.



An older waterway which will become part of the new northern canal.

Survey work on the northern canal, which will divert the water of the Luanhe River to Tianjin.

Photos by Li Fen



other things the moving of 33 million cubic meters of earth, the People's Victory Canal opened its sluice gate and Huanghe water flowed through on its way to Tianjin. By October 28 the water had reached the city, to the great relief of the inhabitants. On November 27 the other two waterways began to channel water toward Tianjin. For the time being, at least, the water shortage was over.

Li Sigong of the flood-control and drought-resistance headquarters in Tianjin remarked that such a vast cooperative effort could only have taken place in today's socialist China. The state had paid roughly one yuan for every cubic meter of water diverted to Tianjin; but city people were asked to pay only 0.09 yuan per cubic meter as their share of the cost.

The long-term solution to the city's water shortage, worked out after careful consideration of the water needs and resources of the whole region, involves bringing water from the Luanhe River in northern Hebei province.

Looking Ahead

The Luanhe River flows north to south through Panjiakou, a gap in China's Great Wall. A huge water control project including a dam, power plant and reservoir is quickly taking shape in this valley. Some 30 km. to the south lies the Daheiting Reservoir. When completed, it will receive water from the Panjiakou Reservoir and raise its level. From there the water will be channeled to the industrial cities of Tianjin and Tangshan.

Construction work on the two reservoirs is virtually completed. Efforts are now being concentrated on the building of two waterways, the northern and southern canals, both originating from Daheiting (see map.)

The southern canal will carry water from Panjiakou, via Daheiting, to Tangshan and other parts of eastern Hebei province. From Daheiting water will pass through a series of canals, tunnels and reservoirs to the Douhe Reservoir, make a slight detour to the Douhe

Thermal Power Plant where it will be used for cooling purposes, and then be channeled to Tangshan. That city's famed Kailuan coal mines have a great and growing need for water. Along the waterways, part of the water will be diverted to irrigate farmlands.

The northern canal will carry water to Tianjin. The canal will funnel water into a 10-km.-long tunnel near the Daheiting dam, and from there into the Yuqiao Reservoir 150 km. from Tianjin. An underground channel will eventually replace the present open channel from Yuqiao to the city to avoid water loss through evaporation and seepage. A new reservoir near the city, the Erwangzhuang, will soon be built to store water.

Construction of the northern and southern canals is underway. The northern canal will be completed in two years. By 1984 Panjiakou should be supplying Tianjin with 1,000 million cubic meters of water per year, thus giving the city a more permanent and reliable source of water. □

CORRECTION

In the article "A Chinese Village's 45 Years" appearing in our January issue, the date of Fei Xiaotong's most recent visit to Kaixiangong should be October 1981.

In "Three Decades Mirroring the New China", in column 2 of page 5 "Three-Family Village" should read "On the Three-Family Village."

Chinese Cookery

Pork Loin Soft-Fried in Batter

(Ruan Zha Liji)

Soft-frying is one of the basic cooking methods in Chinese cuisine. Meat coated with egg white batter is deep-fried to be crisp on the outside and tender inside. Soft-fried lean pork loin is the dish most often prepared by this method. While found on a banquet menu, it is also an easy-to-cook dish for the family dinner table. The method may also be used with chicken meat, prawn balls, liver, kidney, tripe, or any lean pork.

10 oz. (250 grams) lean pork loin
1 lb. vegetable oil for deep frying

For marinade:

½ teaspoon rice wine (or sherry)

¼ teaspoon salt

For egg white batter:

2 egg whites

5 tablespoons flour

2 tablespoons cornstarch

For pepper-and-salt dip:

1 tablespoon salt

2 teaspoons Chinese red pepper (hua jiao) or black pepper

Slice pork horizontally into slices 1.5 centimeters thick. Pound both sides of pork with the blunt edge of a knife to make crosshatch pattern of gashes. Cut pork into 1.5 cm. by 6 cm. slices. Soak in marinade 5 minutes or more.

Prepare coating batter by mixing together egg white, flour, cornstarch and salt.

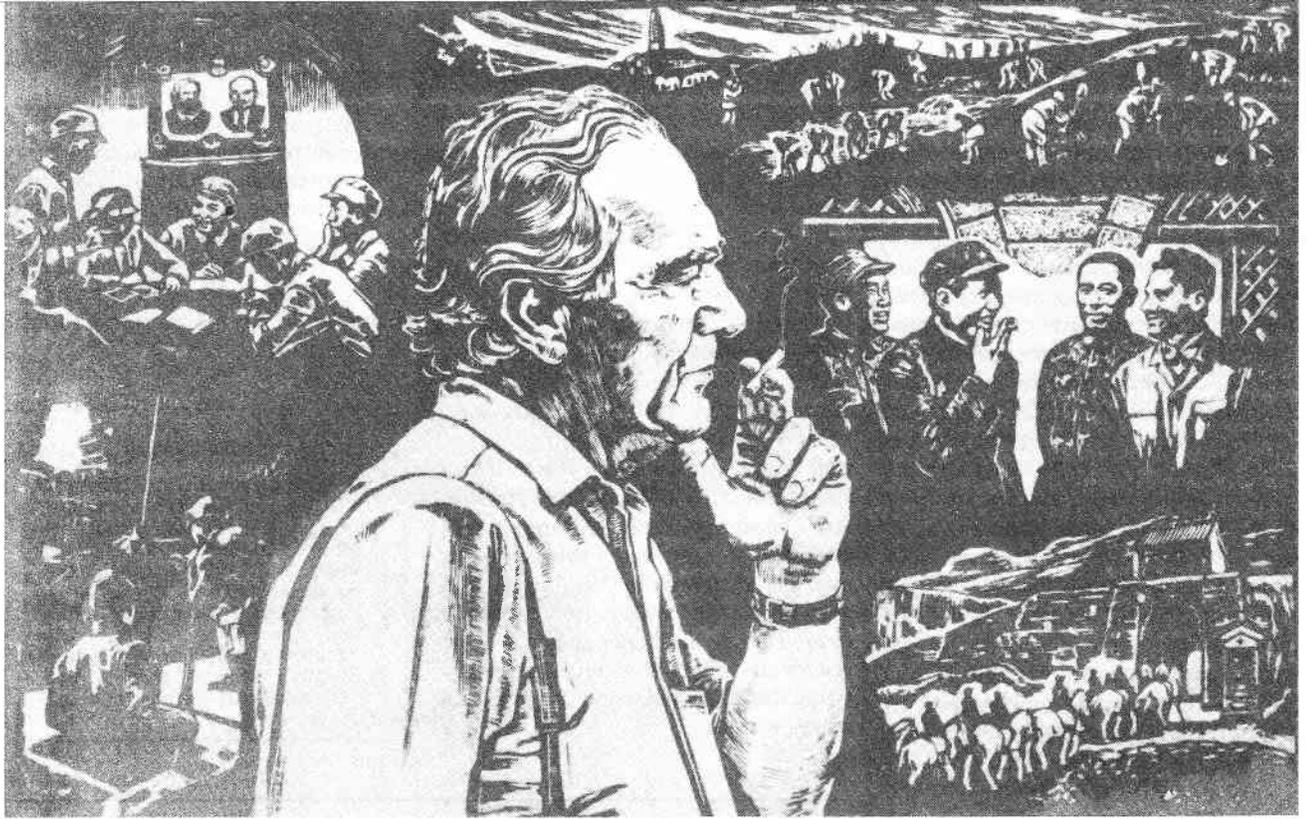
Dip pork slices into the batter.

Heat oil in a skillet until it smokes. Add pork slices. Deep-fry over medium fire for three minutes, or till just before they turn brown. Remove pork from oil. Heat oil again until very hot. Place pork slices into the hot oil and remove almost immediately. Drain, place on a dish and serve.

When eating, dip each piece in a mixture of roasted pepper and salt. At a Chinese-style dinner with several other dishes, this is a serving for four.

How to prepare pepper-and-salt dip:

Place pepper and salt in a heated pan and stir fry for about two minutes over low heat until salt turns light brown. Remove and crush fine with a rolling pin.



A woodblock print of Edgar Snow amid scenes from the famous journey that made the book. *Fu Jingsheng*

Edgar Snow and 'Red Star Over China'

DONG LESHAN

An early Chinese edition of 'Red Star Over China,' printed in 1938.

IN the winter of 1975 I was asked by Fan Yong, managing director of the Joint Publishing Company (Hongkong Branch) to work on a new Chinese translation of *Red Star Over China* by the late Edgar Snow, the famed American journalist. I accepted willingly, for the task meant far more to me than an ordinary professional assignment.

During our conversation, Fan and I recalled the delight and excitement we had felt on first reading Snow's book in the late 1930s. Fan's own copy—which he preserved through long years of war and movement from place to place—is from the first Chinese

edition of *Red Star Over China* published in Shanghai in December 1938. Because of the political situation then, it came out under the title *Notes on a Westward Journey*, which was less likely to attract the censor's attention.

Nevertheless, the Kuomintang authorities soon banned the book. Anyone discovered reading it risked arrest as a suspected Communist, with danger not only to liberty but to life. Despite the taboo, it became more and more popular among Chinese intellectuals. Like a bright star shining in a dark sky, it guided thousands onto the road of revolution.

Fan Yong and I were only two of countless Chinese young people who got their first understanding of the Chinese revolution and the Communist Party through the book. Surmounting all kinds of

obstacles, many made their way to the revolutionary base area in Yanan to join the struggle. Others found ways to fight right where they were, either in Japanese-occupied Shanghai or the so-called rear areas where the KMT exercised a reign of terror against anyone suspected of "Communist leanings."

Snow Visits the Base Area

When Snow first came to the Far East in 1928, he had no idea of making history or getting involved with revolutionaries. The young journalist's head was filled with romantic illusions about the "exotic" East. He planned to stay in China six months; he stayed for 13 years. He saw how the Chinese people suffered from natural calamities, strife among warlords, an

DONG LESHAN is a noted professor and translator, now working with the Institute of American Studies located in Beijing.

oppressive government and foreign invaders; he asked himself why people did not resist. And then he heard of some Chinese who were resisting. In leaving the KMT-ruled areas for the new world the Communist forces were trying to build, Snow inevitably involved himself in the tidal current of the revolution.

By the mid-1930s the Red Army had completed the epic Long March and established their base area in northern Shaanxi. Because of the KMT blockade and propaganda efforts, it was extremely difficult for most Chinese, much less foreigners, to learn what was really happening in the base area. Edgar Snow, with the help of Soong Ching Ling, left Beiping (as Beijing was then called) and broke through the KMT blockade to reach Shaanxi. There he spent four months gathering information.

At Bao'an, the provisional capital, he interviewed Mao Zedong, Zhou Enlai, Zhu De, Peng Dehuai and other Communist leaders. He recorded first-hand recollections of the Long March. He visited southern Ningxia, where Communist and KMT forces were locked in struggle and fighting was heavy. During his stay in the base area, he shared every hardship with the people, for whom he developed a deep friendship. He studied production, education and the new life of the people under the democratic base area government.

Snow returned to Beiping with a rich collection of notes and film, and began to write reports for American and British newspapers. His articles gave the world its first comprehensive look at the Chinese Communist leaders, their accomplishments in the base area and their aims for the future. The reports created enormous interest, and became the basis of *Red Star Over China*.

Deng Yingchao, widow of the late Premier Zhou Enlai, recently recalled: "Our American friend Edgar Snow was the first to enter the democratic base area led by the Chinese Communist Party, and the first foreigner to find out what was really happening there. He was a journalist. He introduced

the whole world, including the Chinese people in KMT-controlled areas, to the situation in the base area. He helped people understand the nature, principles and practices of the Party, the fighting aim of the Red Army. He faithfully and objectively reported on all he saw. He was our best friend, and he loved China deeply."

Worldwide Response

The first edition of *Red Star Over China* was published by Gollancz, London in 1937, and was an immediate sensation. In a month's time, five printings had been sold out, over 100,000 copies in just a few weeks. It was hailed as a work of real historical and political significance. In the U.S. the book, published by Random House, also became a bestseller, the most popular non-fiction work about the Far East in many years.

In Shanghai, isolated and besieged by Japanese forces, veteran translator Hu Yuzhi quickly organized a group of colleagues to finance and produce a collectively translated, printed and published Chinese version, for which Snow wrote an introduction. The book had tremendous impact in China, in Hongkong, and in overseas Chinese communities around the world. Copies were passed from hand to hand as news of its contents spread.

Snow was to write about China again and again at various periods before and after liberation. Although popular, none of his later works surpassed *Red Star Over China* in circulation or influence. Some time after the book was published, Snow noted that those who agreed to be mentioned by name in the book thereby knowingly endangered their lives. He himself took the risk of traveling to the base area and publishing the book, and events of his later life proved that the risk was a long-standing one.

Enduring Influence

Red Star Over China ranks with John Reed's *Ten Days That Shook the World*; each is an influential,

objective report of one of the great 20th century revolutions. The difference is that Reed's book was about the already successful October Revolution in Russia, while Snow's was about a revolution still in the making.

When Snow wrote about it, the nature of that revolution was unknown or misunderstood by many people, even in China. His book broke through the KMT veil of rumors, lies and slanders and told the truth about China's revolution. Countless people were deeply impressed by Snow's conclusion that the revolution was just and its success inevitable. It is not difficult, then, to understand why the book has been reprinted again and again over the years. Even today, when the red-star flag has flown over all of China's mainland for over 30 years, this book is essential reading for those who want to understand China's past, present and future. Some 1.65 million copies of the 1979 Chinese edition have been printed, and new generations of Chinese readers are discovering through this book the revolutionary beginnings of their people's republic. □

Written in memory of our friend Edgar Snow on the occasion of the tenth anniversary of his death.

The new 1979 Chinese edition of 'Red Star Over China.'



Snow Is Remembered in His Own Country

MARY CLARK DIMOND

EDGAR SNOW died in Eysins, Vaud, Switzerland on February 15, 1972. The same day of February of 1982 marks the tenth anniversary of that sad event.

Edgar Snow, born in 1905 in Kansas City, Missouri, the son of a printer and publisher, was descended from early American settlers. Through relatives, he was familiar with both life in the city and life on a farm in rural mid-America. He was raised in a warm, strict and intellectual atmosphere. He attended grade school, high school and junior college in the city of his birth. A memorable trip in a Model-T Ford car to California at age sixteen broadened his horizons, and he later filled out his education at the University of Missouri School of Journalism, at Columbia University in New York City and at a variety of jobs demanded of a young man of a family in modest circumstances.

He reached the highest points of his career traveling the eastern hemisphere as a foreign correspondent. Of these years he was to spend thirteen in China, and one of the several books he wrote is the classic *Red Star Over China*, the story of the beginnings of China's restoration as a powerful and self-respecting nation. Traveling over much of China, Edgar Snow witnessed at first hand and then wrote of the dilemma of this great country which was then almost totally crushed by foreign nations, dishonest rulers and desperate living conditions. He risked his life to penetrate military lines to interview future Chinese leaders who were then mobilizing in the mountains of the northwest to

overcome the problems of their people.

Edgar Snow is well known and much beloved by the Chinese people. When they heard of his fatal illness, the government of China dispatched a team of doctors, nurses and equipment by plane to the farm house where he lay dying to care for him and his family through those last tragic weeks.



Edgar Snow in 1940.

SINCE his death many American friends joined together to perpetuate his memory. The Edgar Snow Memorial Fund Inc. was organized in 1974 in connection with the General Library of the University of Missouri, Kansas City. Its intent is to commemorate through its activities the courageous and talented journalist who wrote the true story of the world's most populous nation. Stubbornly, over decades of his life, Edgar Snow presented these facts in spite of their unpopularity over a period when he was maligned and subjected to persecution in his own country. At the time of his death in 1972, the prophecies of Edgar Snow were beginning to be recog-

nized as having been right, and his efforts for a harmonious relationship between a nation comprising one quarter of mankind and his own were beginning to bear fruit.

The Fund's primary purpose is not only to collect books, photographs and memorabilia pertaining to Snow's life, but to gather also for students, scholars and the general public materials relevant to the history of China in this century. The Edgar Snow Memorial Fund Collection is available for research, and the growing demands for this service have been gratifying. A portion of the Collection is on display at the General Library at all times, and a larger variety will be shown during several months of 1982 in recognition of the tenth anniversary.

THE Fund also sponsors annual Edgar Snow Visiting Professorships from China at the University of Missouri, Kansas City. Thus far, two have been held in the fields of medicine and of the performing arts by Dr. Xu Jiayu of Shanghai and by Madame Zhou Guangren of the Beijing Conservatory of Music respectively. A Visiting Professor in the field of law and a leading actor and director of the Beijing People's Art Theatre will be the next Edgar Snow Visiting Professors.

Supplying informational materials for use of travel parties to China bearing Edgar Snow's name, arranging fellowships, attracting outstanding lecturers and establishing suitable housing for students and scholars from China, mostly in connection with the University of Missouri, are among other Fund projects. A prime goal is an expanded physical facility at the University. The Fund has an excellent Board of Directors of fourteen individuals and twenty-six Sponsors of national and international distinction. The Fund is a worthy memorial which strives to carry on a man's work in an ever-changing world. This memorial in mid-America to as dynamic a man as was Edgar Snow means above all not to be static. □

MARY CLARK DIMOND is President of the Board of Directors of the Edgar Snow Memorial Fund at Kansas City, Missouri, U.S.A.

World Champions

HE LU

TWELVE plucky Chinese girls, averaging 24 years, charged into world volleyball championship last November, downing the teams of Japan, the Soviet Union, the United States, Cuba, South Korea, Bulgaria and Brazil.

What are they like and what made them cup-winners?

They came from one army and six provincial teams. They average 1.78 m. (5' 8") in height. All of them liked ball games when they were small, and all of them trained in sports schools. As members of the national volleyball team, they built up determination and spirit, all-round skills, near-perfect team coordination and a general strategy of attack. In 1977 they won fourth place in the world volleyball games and in 1981 drove to the top.

'Iron Hammer'

Lang Ping, the team's chief spiker, is 21 and 1.84 m. (6 feet) tall. A Beijing girl, she had wanted



A proud moment as the Chinese red flag rises over the winners' box.

Lang Ping (left), the team's best spiker, shoots a ball past straining American team members.

In the match with Cuba, Sun Jinfang's timely maneuver saves the ball for the Chinese side.



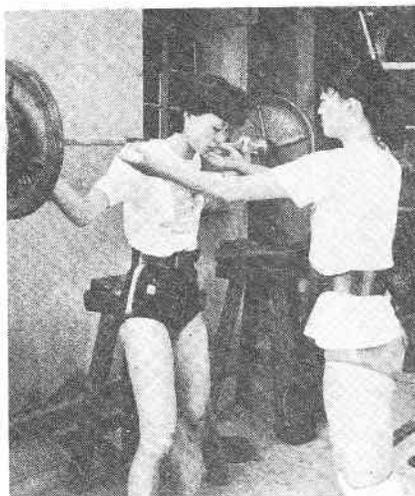


In a training session, Coach Yuan Weimin hits balls over the net at an acute angle so team members can practice recovery of low shots.

Cao Huiying in training.



Chen Yaqiong (left) and Yang Xi lift weights.



to be a painter, a geologist and even a pilot. But when she was thirteen she went with her father to an international volleyball match and was so fascinated by the sure and graceful way the players handled the ball that she changed her mind — she would be a volleyball player.

Sent to a sports school by her father, Lang Ping was not admitted because she was thin and only weighed 35 kg. Stubborn insistence got her enrolled in another sports school. Here, hard work and rapid progress soon boosted her into the Beijing women's volleyball team. Not content, she wanted to wear the emblem of the national team — which she did in 1978. In 1979, at the 8th Asian Games in Bangkok, her spiking made some teams call it a "new weapon of the Chinese team". At the Asian volleyball championship the next year, her powerful slams helped China win and moved her up with Slo Hyman, an American girl 1.96 m. tall and Mercedes Pomares from Cuba, as the world's best spikers.

Now called "Iron Hammer", she was asked, "Where do you get your hammer power?" Lang Ping smiled. "Hard practice, of course," she answered. Every day she runs long-distances and does squatting exercises with barbells on her back. She lifts weights to increase her strength. At the 3rd World Cup

Volleyball Tournament she was given a "Best Player" award.

Soul of the Team

At the prize-awarding ceremony after the world matches in the Osaka stadium, the audience was impressed by Sun Jinfang, captain of the Chinese women's team. She got three titles, outstanding player, the best setter, and best player.

Sun Jinfang was born 27 years ago in a railroad worker's family in beautiful Suzhou in south China. At 16, she was chosen for the Jiangsu province team. Her offense and defense, and quickness of mind and movement was credited to hard work. In 1976 her skill made her a setter on the national team.

"A setter should have temper like a lamb," a volleyball expert said, "because he is the one who initiates cooperation at any moment in a game." Yet during a match, applause for a successful point always goes to the spiker, while the setter is often blamed for lack of cooperation if the spiker fails.

Sun Jinfang is such a lamb, skillfully serving her partners. No matter from which direction, whether well passed or not, the ball becomes sure and safe in her hands. An excellent offense organizer, she is good at finding the weaknesses of rivals and thorough-

Team captain Sun Jinfang is particularly good at setting up shots.



Zhou Xiaolan (right) and teammates jump hurdles to improve strength and timing.



ly familiar with the personality, temper and techniques of her teammates. Lang Ping is quicker than the others and can be given balls that are a bit far from her. Chen Zhaodi should not be passed to if she is too impatient. Liang Yan can take fast passes because she turns them into quick offense.

Small But Important

Zhang Rongfang, 25, from Sichuan province is only 1.74 meters (5'6½") tall. This has driven her to train more strictly to compensate for her shortness. To develop her passing skill, she did extra training with the coach. Once she was exhausted from practicing saving balls fed to her by the coach, strong ones, weak ones, some far from her and some close. When she had scarcely recovered from falling with one ball, another would be shot at her. She became so furious with the coach that she caught the ball and threw it away. "Go get the ball!" the coach ordered. "And get out of here until you think training is necessary!" She stamped her feet and shouted, "I won't get out!" She went on practicing in spite of her aches and pains.

Such efforts made Zhang Rongfang an excellent volleyball player. Everyone on the Chinese women's volleyball team has had the same experience. "Each of us," one of the girls said, "has been tired out from training to the point of bursting into tears. We, too, got angry with our coach, but he was right. Otherwise, how could we have captured the world cup?"

Love and Volleyball

Sports life for an athlete is not long. Aware of this, the girls have concentrated all their efforts on the volleyball they love so much. But they are not living in a vacuum. They receive thousands of letters, for example, many from boys expressing their love for them. Photos and gifts come to them almost every day. How do the girls regard love?

Cao Huiying is a veteran at 27. Her fiancé is a worker. She has



Zhang Rongfang (second left) and teammates study the strategies of other teams through televised matches. Photos by Xinhua

got every reason to set up her own family and retire from volleyball. She won three titles at the 2nd World Cup Volleyball Tournament and was elected a deputy to the National People's Congress. Injured in an international tournament in 1978, she was hospitalized a fairly long time. After she recovered she told her fiancé, "This has stolen a lot of precious time from me. I want to extend my sports life, even if only another two or three years, or I'll miss the chance to help China win." Her fiancé told her, "Have confidence in yourself, Huiying. We can wait."

Another girl on the team tried to test her boyfriend. One day, putting on a sad look, she said to him, "I'm getting older and don't have much more time to play volleyball. Let's get married now." Worried, the boy answered, "No, no... not now when China needs you." The girl burst out laughing and said, "You're wonderful!" In the eyes of these girls, their boyfriends must support them wholeheartedly in their cause.

Two 'Merciless' Men

The girls have often called Yuan Weimin and Deng Ruozeng who coach the team "devils", for they are hard taskmasters.

In 1980, right after the team's plane landed in the United States,

Yuan and Deng took the girls to the volleyball court, even before they could recover from jet lag. Some had felt sick getting off the plane. "Vomit if you want to, but training starts now!" said the coaches. Not until the next day when they had won their first match did the girls begin to regret that they had cursed their two "devil" coaches.

Yuan Weimin, 42, and Deng Ruozeng, 45, were both captains of the Chinese men's volleyball team. Since they began coaching the women's team in 1976 they have poured all their hearts and energy into the girls' training, confident they would capture the world cup for China some day. They work hard in each coaching session and carefully study new trends and techniques in the volleyball world.

In the Osaka stadium spectators saw two very serious men without the slightest smile. Actually both of them are full of life and have wide interests. Yuan likes literature and is a fairly good calligrapher. Deng Ruozeng is interested in music and sings with a beautiful voice. But for volleyball they give up much. Their wives are volleyball players. Back from Osaka, Yuan and Deng immediately plunged into preparing the girls for the world volleyball championship in 1982 and the Olympic Games in 1984. □



'We always wash up before eating, don't we?'

Transforming a Maternity and Child-Care System

XIMEN LUSHA

BUYE production brigade set up its first kindergarten in 1972, but for some years brigade members admittedly paid more attention to their chicken and pig farms. These latter made money for the brigade, while the former was seen as a "losing proposition." Today Buye's kindergarten and nursery facilities are just about equal to any found in China's cities, and maternal and infant health care — formerly one of the weaker points of the health-care system — have greatly improved.

The progress in this brigade is typical of Rongcheng county, Yantai prefecture, Shandong province. Some 80 percent of the county's production brigades now have well-equipped professionally staffed kindergartens serving 34,000, or 80 percent of all kindergarten-age children. Besides the 823 kindergartens there are 55 permanent nurseries for children under three.

For many years rural areas have lagged behind the cities in ma-

ternal and child care. Even today Yantai's standard of progress is the exception rather than the rule. But there is movement forward and, as at Yantai, this movement is connected with the countryside's growing prosperity, changes in economic structure, and the impact of population-control policies.

At the Buye Brigade

Rongcheng county is situated on the coast at the apex of the Shandong peninsula between the Bohai and Huanghai seas. The economic base is about half farming and half fisheries and other marine enterprises. Buye itself comprises 910 households and just over 3,000 people.

On my visit to the brigade I was proudly escorted around the new kindergarten — a row of grey brick buildings with red-tiled roofs and a floorspace of about 150 square meters. A spacious playground in front of the building is equipped with slides, seesaws, tot-size basketball equipment and sandboxes. In the neat, well-lit classrooms are rows of small desks and chairs, on

the walls papercuts and colorful children's posters. From one of the classrooms come the clear, bright voices of children singing to the accompaniment of a small organ.

I listened in on lessons in Chinese phonetic spelling and character recognition; the textbook used is an experimental one for kindergartens developed in Shandong province. Simple arithmetic is also part of the curriculum. One class was in the middle of a hygiene lesson. "What kind of water should we drink?" asked the teacher. "Boiled!" came the quick and eager voices. "Why not plain water?" Giggles now with the answers: "Because it'll give you a STOMACH ACHE." "Why?" wondered the teacher. "Because it's got BACTERIA in it," was the triumphant response.

Sun Deyue, vice-head of the brigade in charge of welfare, tells me that 140 children from ages 4 to 7 are enrolled in the kindergarten's four classes. It is popular with parents — 90 percent of all eligible children attend it. All the teachers are women of about 20 with junior or senior middle school education and some specialized training. Since the brigade consists of a single village, the children eat and sleep at home. Attendance at the kindergarten is free.

The Nursery

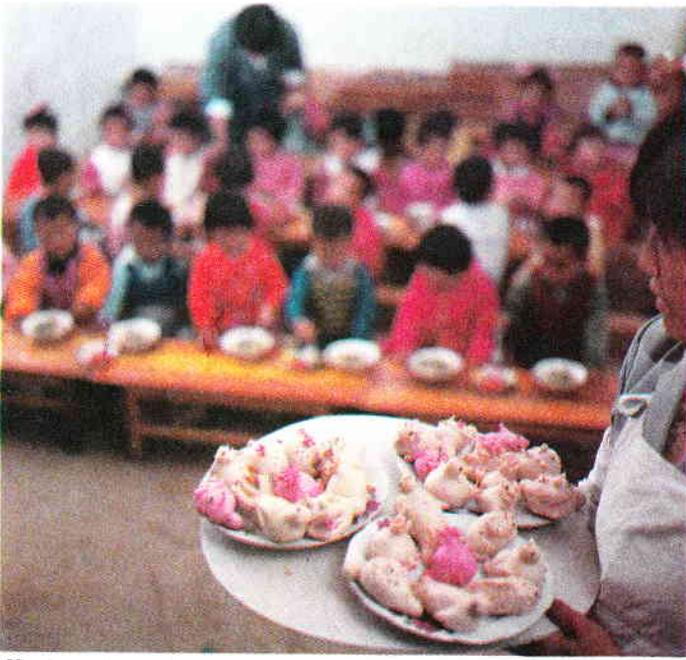
The brigade's nursery is situated in another row of red-tiled brick buildings with a southern exposure. The rooms for the higher and intermediate classes are equipped with small tables and chairs, a variety of toys and a cupboard for each child's drinking cup. A row of small towels hangs on the wall. In one playroom a gaily painted metal turnabout whirls briskly, its seats filled with laughing children.

In the room for children under a year old a *kang* (sleeping platform of bricks in the style of the north China countryside) is encircled with a wooden railing, inside of which a nurse plays with her charges. Against the wall is a neat stack of little quilts in gay cotton prints. Suspended on strings are rag dolls, cloth tigers

XIMEN LUSHA is a staff reporter for China Reconstructs.



A walk by the seashore, and teachers ready to answer eager questions about boats and the sea.

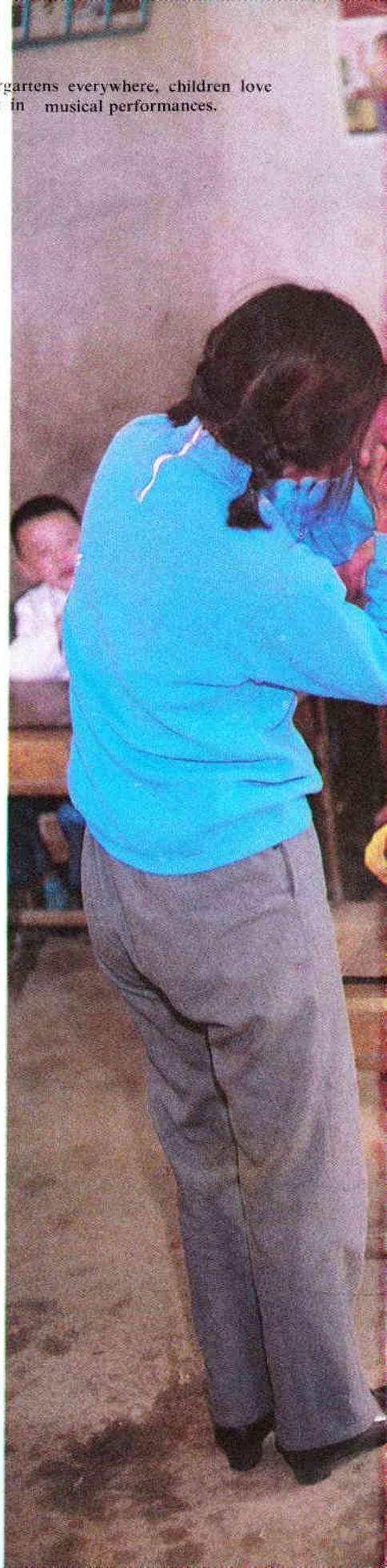


Kindergartens take pains to serve nutritious meals.

A beginning lesson in calisthenics for the tots of the Fengtong brigade kindergarten.



As in kindergartens everywhere, children love to take part in musical performances.







Teacher Sun Mingxia with a new pupil.

Doctors from the county health center for mothers and children visit kindergartens frequently to make sure the young ones have regular check-ups.

A major duty of Dayudao brigade's barefoot doctor is making the rounds of homes with newborn babies.



Picking apples is a popular extracurricular activity.



Photos by Zhou Youma

and roosters and wooden or plastic toys.

The nursery has a bathhouse and a small kitchen where mid-morning and afternoon snacks are prepared. A weekly menu on the wall lists noodles in pork-liver soup, scrambled egg pancakes, meat dumplings and meat-filled buns, and the cook tells me the menu is changed once a week. The younger children twice a day drink a milk substitute prepared by the kitchen staff.

To cover the cost of the food, parents give the nursery one and a half to three kg. of grain and between 30 and 60 cents a month, depending on the age of the child. Firewood, vegetables and a small monthly money subsidy are provided by the brigade. There is no other charge to parents.

A Changed Situation

When the brigade's kindergarten was first set up in 1972, only a few old rooms with a total floor-space of some 30 square meters were set aside for it. Children had to bring their own stools, and tables were improvised from planks and bricks. For lack of trained teachers and nurses, a few elderly women were asked to look after the children. The prevailing feeling was still that nurseries and kindergartens were "losing propositions" on which not much effort should be expended.

New circumstances have changed the attitudes of the brigade leaders and the villagers as well. For one thing, prefecture and county leaders have made real efforts to promote mother and child care and to assist brigades in carrying out improvements. A second major reason is the rapid advance in farming and sideline activities; the attitude now is that women need to play a bigger role in production rather than staying home to care for children.

The brigade's annual per hectare yield of grain, about seven and a half tons before 1975, surpassed 13 tons by 1980. Income from embroidered goods (mainly for export) has jumped from 10,000 to 45,000 yuan per year, and income from kelp raising has doubled. And

women are the main work force in the latter two sidelines. Freeing them from daytime child-care responsibilities has thus greatly increased income for individual families and for the whole brigade.

Out of its larger income, the brigade spent 10,000 yuan on the kindergarten and nursery premises, equipment and toys. Ingenious ways were found to make the money stretch farther. The blacksmith and machine maintenance teams, for instance, made the nursery turnabout from scrap metal bought from a junkyard.

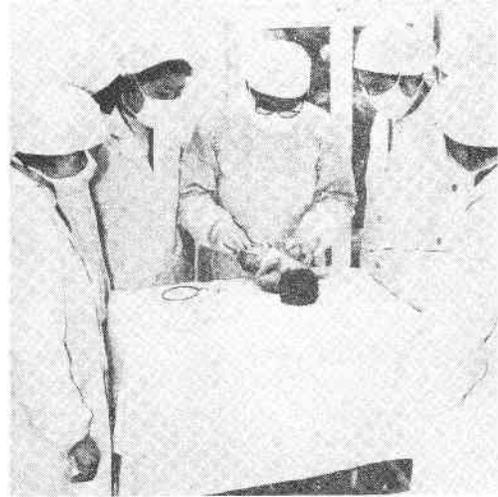
A third major reason behind the changes in attitude and improved child care is the local success in the national family planning campaign. All couples have now responded to the government's call to have only one child; no second child has been born in the brigade since 1980. This makes Buye brigade rank among the best in family planning in the rural areas.

Naturally, the only child is quite precious to the parents, who want him or her to receive the best care so as to grow up sound in mind and body. The nursery and kindergarten have not disappointed them. Parents now remark on how polite and tidy their children have become, how well they can sing and dance, and how many characters they have learned to recognize.

Aid from Government

To help brigades, Rongcheng county's bureau of education has organized seven successive teacher training classes, and to date over half the county's teachers have taken the course. Provincial and prefectural health departments have helped out by reprinting teaching material from Beijing and Tianjin on preschool education, child health care and training for child-care workers.

Crucial, too, is the devoted band of workers in the field. Wang Yunxiu, head of Rongcheng county's Maternal and Child Care Center, is in her forties and rather frail. She is nevertheless constantly busy going from brigade to brigade to keep track of



Examination and treatment of the newborn is an important part of the training course for Rongcheng county's new contingent of barefoot doctors specializing in maternal and child care.



Entertaining a young patient in the county hospital's pediatric ward.
Zhang Jingming and Zhou Youma

developments and pass on good ideas. She knows the strong points and shortcomings of every teacher in every kindergarten, and is always ready to help out with difficulties. Formerly, no brigade nurseries had kitchens. When one started a kitchen, Wang went to work on the people of other brigades who thought it too much trouble. Eventually many nurseries set up their own kitchens.

Maternal and Infant Care

Since 1975, Yantai prefecture's maternal and child care centers and health departments have made significant advances. One major step was reorganization for the ranks of rural midwives. Most had been country women recruited for the work in the early 1950s. Although given some scientific

(Continued on p. 43)

Population Planning in China

LIU ZHENG

CHINA is the world's most populous country. Almost one-fourth of all human beings are Chinese*. Sheer size would be enough to make China of interest to experts and ordinary people everywhere who worry about world population problems. But the particulars of our country's situation have even deeper international implications because they mirror on a large scale many of the problems facing all developing countries:

1. Over 80 percent of the Chinese people live in the rural areas, where population growth rates are higher than in the industrialized cities, and are economically dependent on agriculture. Thus the country's overall socio-economic development will depend very much on solving the basic problems of the countryside.

2. Economic growth after 1949 led to dramatically improved living standards, a rapid expansion of medical and health facilities, and a consequent drop in the mortality rate from more than 20 per thousand in old China to about 6-8 per thousand in the 1970s. The overall decline in mortality was not accompanied by a corresponding decrease in birth rates, so that the rate of natural increase rose to around 2 percent per year.

3. The age structure of the population is young. As of 1975 36.8 percent of the total was age 14 and under, while those 65 and over were less than 5 percent. Feeding, clothing, educating and providing jobs for the young is therefore a major problem, as is restricting the rate of population growth in the future — for, as these figures show, a very large proportion of the population is in the child-bearing range.

LIU ZHENG is Director of the Population Research Institute, Chinese People's University and Vice-President of China's Demographic Society.

The present article is condensed and adapted from a paper presented at the Asian Conference of Parliamentarians on Population and Development held in Beijing, October 1981.

4. The national economy has undergone tremendous development since 1949. However, because of setbacks and mistakes, most serious those of the "cultural rev-



Professor Liu Zheng addresses the October 1981 Asian Conference of Parliamentarians on Population and Development. Zhang Shuicheng

olution" period, the advances were not nearly as great as they might have been.

The population problem is intimately connected with economic development. The major task facing China today is modernizing the economy while restricting the population growth rate, for only in this way can per capita GNP and general living standards be raised in a relatively short period of time.

Problems of Rapid Growth

China had a population problem even before 1949; its backward economy could not begin to support its people adequately, and the majority of the population was reduced to the level of dire poverty and starvation. Since that time the economy has been transformed,

and despite the swift population growth during that same period, China has been able through her own efforts to solve the basic problems of feeding and clothing her people. But the rapid increase of population — from 540 million in the early years after liberation to the present one billion — has brought its own problems.

Employment. China's labor force now numbers more than 400 million, of whom about 300 million are engaged in agriculture. And the relatively high birth rates have produced a large number of people of working age in need of employment. In recent years the economy has had great difficulty in absorbing this influx of new labor.

Recent policy changes have eased but not eliminated the present problem. New emphasis on labor-intensive production, collectively owned enterprises and small-scale individual employment in the period from 1977 to 1980 has resulted in the finding of jobs for 26.66 million. But in the future some three million urban youth and 20 million in the rural areas will reach working age. Large investments will be required in industry, transport, communications and other areas to absorb this new labor force. This will lead to a conflict between the need to create jobs and the limited amount of investment funds available to the state. Thus employment is a major aspect of the population problem.

Accumulation. To accelerate the process of modernization, it is imperative to increase the accumulation of funds for investment purposes, and such accumulation must come primarily from domestic sources. Increases in national income are at present limited, and the growing population will absorb most of any new

*As of the end of 1980, one billion people (including Taiwan province), or 22 percent of the world's population.



Back in the 1950s, Chinese economist Ma Yinchu's advocacy of population control in China did not get the attention it deserved. The Conference of Parliamentarians conferred an honorary award on centenarian Professor Ma, who could not attend because of infirmity.
Zhang Shuicheng

increases, leaving little for accumulation. Based on 1978 estimates, the state spends an average of 2,200 yuan to bring up a child from before birth to the age of 16. Raising the 600 million children born since 1949 to age 16 has therefore required a total expenditure of 1,300 billion yuan—roughly 30 percent of the total gross national income over that same period.

Living Standards. Rapid population growth has also held down living standards and per capita consumption. From 1953 to 1978 a large share of the annual increase in consumption funds—some 58 percent—went to satisfy the needs of new segments of the population rather than improving the standard of living of the original population. Funds available for consumption increased by 280 percent—no mean achievement. But at the same time population rose by 66 percent, so that per capita consumption increased by only 130 percent.

Education. Population increases are also a major factor behind China's relative slowness in establishing universal primary and middle school education and the low college enrollment. Only about 95 percent of all children of primary

school age are in school today; only 88 percent of primary school graduates go on to junior middle school and only half to senior middle school. And less than 5 percent of senior middle school graduates can acquire a higher education. Thus, more than half of all young people cannot receive a full secondary education—a fact obviously detrimental to the improvement of general scientific and cultural levels and incompatible with a fully modernized society.

It is evident that China's efforts to develop the economy must be accompanied by equally vigorous efforts to control population numbers, increase the quality of the population, and adjust its growth to the growth of the national economy.

Strengthening Family Planning

China's outstanding achievements in population control during the 1970s are illustrated by the rapid decline of the natural growth rate—from a high 25.93 per thousand in 1970 to 11.66 per thousand in 1979.

Between 1966 and 1971, population had increased at an average yearly rate of almost 2.6 percent, or 20 million a year—equivalent to adding the total

population of a medium-sized country to China's already large numbers.

For many years, China had paid sole attention to economic production and almost no heed to rising population figures. State planners did their best to increase overall GNP, but the fact that per capita output and income lagged behind was not sufficiently recognized.

By the early 1970s leaders at all levels had realized that the spiraling population was seriously exacerbating the problems of economic construction, and population control was brought into the orbit of state planning. Government organs at all levels established special offices or departments to lead family planning efforts. Study classes were held everywhere to raise the consciousness of leaders and family planning workers on the importance of this work. Long-term goals, guidelines and policies were established.

Today population planning is an integral part of state policy. The new Constitution promulgated in March 1978 made family planning for the first time part of China's fundamental law, and the 1980 Marriage Law passed by the Na-

At a Shanghai textile mill which has done outstanding work in promoting family planning, women who pledge to have no more than one child receive special certificates.
Wang Zijin



tional People's Congress stipulates that both husband and wife have the duty to practice family planning and encourages both late marriage and the postponement of child-bearing. Every commune and neighborhood has full or part-time family planning personnel responsible for promoting family planning and conducting population surveys which provide the basis for local and national policies.

Education and Publicity

China firmly opposes coercion and command in family planning. Years of experience have taught that the most effective means of obtaining results are education and propaganda.

A key factor is educating people to the enormous significance of population control to the state, the collective and the individual and to the great difficulties uncontrolled population growth has brought in the past.

Comparisons are used to show how family planning relates to collective economic development and better living standards for each family. For instance, a survey of a commune in Shifang county, Sichuan province, showed that families of three or less (usually one child and two working members) have per capita incomes of 400 yuan and per capita grain allotments of 400 kg., while the corresponding figures for families of five or more (usually two working members, two or more children and one elderly person) were 200 yuan and about 350 kg. of grain. Of the commune families in debt, 86.6 percent had three or more children. Such comparisons are easily grasped by rural people.

Family planning involves the transformation of old social traditions. Sentiments such as "have sons early," "the more sons, the more blessings," and "sons are better than daughters" have been rooted in people's thinking for thousands of years, and overcoming these ideas is a vital part of educational and propaganda efforts.

Publicity also emphasizes the relation between family planning

and the liberation of women. Large families under present conditions inevitably burden women with heavy child-care and housework responsibilities. A countywide survey in Sichuan province showed that the number of days rural women could participate in paid labor was inversely proportional to the number of children they had. A woman with one child could work about 300 days a year; those with two children, about 250 days; and those with three, only about 10 days.

Economic Incentives

Current policy is to encourage married couples to have only one child. In China, the family is still the primary unit of consumption and procreation, and the number of births is closely tied to family economic interests. In deciding how many children to have, parents take into account the costs of bringing up a child until it reaches working age. But they also consider that when the child grows up it will contribute to family income and, in particular, provide the parents insurance for their old age.

This consideration is particularly important in rural areas, where the cost of raising a child is still quite low and where, because social security benefits are inadequate, elderly people are mainly dependent on their children. Economic incentives are designed to make having only one child more attractive and advantageous.

There are two kinds of monetary incentives: (a) In urban areas, one-child families are given annual welfare benefits ranging from 30-60 yuan, depending on locality. In rural areas, varying amounts of work points are awarded. In both places, allowances continue for the first 10 to 14 years of the child's life. (b) A mother who pledges to have only one child is given maternity leave up to six months at full pay if she is a wage-earner and drawing the normal quota of work points if she is a commune member.

In many areas priority is also given to only children for nursery placement, medical care and em-

ployment. One-child urban families are allocated the same housing space as two-child families, and in rural areas one-child families are allotted housing land and private plots equal to that of two-child families.

Attempts are also being made to relieve people's concern about their old age by strengthening social security benefits for the elderly. Urban one-child or childless couples now have a subsidy to their retirement benefits. Better-off rural collectives have instituted retirement pension schemes; many in the medium income range have set up comfortable homes for the childless elderly; and even the least well-off try to ensure that childless or one-child couples enjoy a relatively better than average standard of living. Where necessary, the state gives appropriate assistance to rural collectives.

Contraceptives

Effective control of birth rates depends to a great extent on providing women of child-bearing age with technical advice and guidance on contraception and ensuring adequate supplies of reliable contraceptives. China advocates use of a comprehensive range of contraceptives, with the specific means depending on physical conditions and individual choice. Contraceptive devices are provided free of charge by the state, as are induced voluntary abortions and sterilizations. Women undergoing abortions or sterilization are given time off after the operation, with full pay or regular workpoints insured.

Chinese health departments at all levels have trained a large contingent of professional personnel who have contributed much to keeping down the birth rate through research, education and technical guidance on contraceptive use.

Finally, family planning workers at the grassroots levels help educate women as to the biological mechanisms of reproduction, the range of contraceptive choice, and the most appropriate means for their particular circumstances or condition. □

Asian Population and Development

The UN-sponsored Conference of Parliamentarians on Population, Development and Resources in Asia was held October 27-30, 1981, in Beijing. The more than 100 delegates from 18 countries exchanged experiences on common problems, explored ways of coordinating their efforts, and among other resolutions called on the peoples of Asia (who comprise two-thirds of the world's population) to bring their population growth rate down to 1 percent by the year 2000.

During the conference our reporters Zhang Shuicheng and You Yuwen interviewed a number of participants. Excerpts from the interviews appear below; for the article "Population Planning in China" by Professor Liu Zheng, a member of the Chinese delegation, see page 24.

— Ed.

RAJIT ATAPATTU, Convenor of the conference and head of the Sri Lankan delegation:

In the first decade after World War II the chief concern of demographers and planners was the devastatingly high mortality rates in the poorer countries of the world. The international community concentrated on the development of health infrastructures which resulted in a dramatic reduction in mortality figures. Life expectancy rose appreciably.

Then, in the 1960s, we began to hear another message — "Cut your population growth or the world's resources will not be sufficient to feed you." The people of Asia have responded to the challenge as responsible citizens of the world. With improved standards of health and education, our rural poor increasingly realize that they can have fewer children and be confident of their survival, so they have begun to plan their families. Asian governments have also come to consider population control a part of development strategy.

I am most impressed with the dedication of Chinese leaders in tackling their immense population problem by taking the very bold, and I think very practical, step of calling for one-child families.

As for the development program in China, people are cooperating whole-heartedly with the government. The Chinese people are

among the most hardworking in the world, from what I have seen on my visits to China. The people have faith in their country's leadership. As in China, we in Sri Lanka should devote more efforts to educating and guiding the peasants, and helping them to see that



Dr. Ranjit Atapattu.

family planning is beneficial to themselves and to the country.

This is the first time that Asian parliamentarians have gotten together to explore a specific problem. But it shows that action which represents some two-thirds of the world's people is responsible action. If we can together discuss these related problems, we can discuss other problems. We Asians

must be able to unite and act in concert.

WERNER FORNOS, director of the U.S. Population Action Council:

The results of China's efforts over the last three years have far surpassed the experiences in any other country to date. Among other Asian countries, Singapore also



Werner Fornos.

has an admirable record. China's and Singapore's population programs have as their cornerstones the things that we think ought to be stressed for growth rates to come down. In Indonesia, Thailand, Hongkong and Sri Lanka there have also been declines in birth rates, though not so dramatic as in China or Singapore.

In Singapore, positive incentives include giving offspring of two-child families guaranteed state college educations at the college of their choice. Families with only two children are entitled to free medical care, have preference in newly constructed public housing, and a number of other minor benefits.

Disincentives include: offspring of families with more than three

children can only go to elementary school; they have no preference in public housing; and if they are in public housing when they have their third child, they must move out. Government workers or military officers who have more than two children will not get promoted. Persons with more than two children cannot get government jobs.

In Indonesian villages on the island of Bali, they give every newly-wed couple a pig. As long as they have no children, they may keep it. State experts artificially inseminate the pig, so within a year the family has almost all its meat supply free. After they have one child, and only one child for two years, they get a second pig. But once they have a second child, they lose both pigs.

Each village has a family planning chief designated, responsible for getting the message to every family that if Indonesia is to be a strong, prosperous and respected nation in the world, it is the responsibility of each citizen to help limit the size of the family.

I had an opportunity, thanks to my colleague Madam Wang of the Chinese Family Planning Association to see whatever I wanted to see at Evergreen Commune. I saw evidence everywhere of motivation for small families, political leadership that wanted to make the goals work, and the availability of all means for family planning, including sterilization and abortion. As Madame He Liliang (member of the Chinese delegation and deputy convenor of the conference) has told me, China seeks to promote the one-child family through motivation, peer pressure, and assisting people to see that this is in their best interests.

One challenge China faces is the very large portion of the population that is under twenty years of age, which makes it very difficult to achieve the one-child goal. But China's policy is a forward-looking one. For this is not just China's problem, but the whole world's. We, you and I, don't own this world, we only rent it for a little while, before we pass it on to future generations.

I have a suggestion on the one-child family. I think family planning is a mutual responsibility of men and women, and I think that the man should also sign the one-child pledge. I also think we should get young people to think about responsible parenthood when they are in school; perhaps the one-child pledge ought to be signed by high school students.



Professor Toshio Kuroda.

TOSHIO KURODA, founder of the Population Research Institute at Nihon University, Japan:

Japan is poor in both land and natural resources. The only thing it has in enormous quantities is population. But Japan, in its economic development, has turned disadvantages into advantages, and has overcome many obstacles.

Japan has succeeded in building a strong economic foundation because education has been regarded as a basic necessity of life. Dissemination of elementary education is a means for successfully controlling the population and implementing family planning. In Japan, education has had a significant effect on changing the way of life and promoting low rates of birth and death.

From 1947 to 1949 — our "baby boom" years — Japan's birth rate was about 34 per thousand population. Then the birth rate started to decline very quickly, and in just 10 years it had halved from 34 to

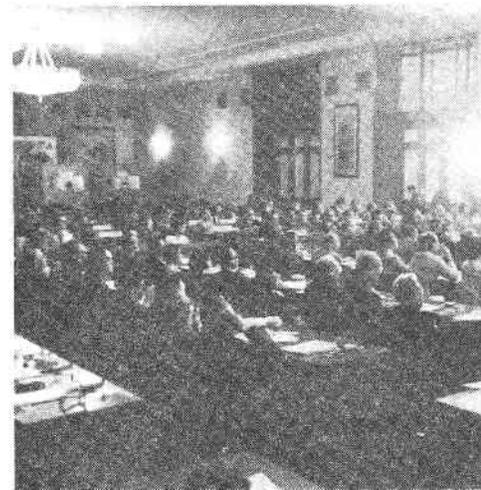
17 per thousand. In China too population growth quickly declined to only 17 per thousand in 1979. Such rapid drops are unique around the world.

Japan has not found it necessary to have so comprehensive a family planning policy or organizational network as China's. Japanese families want to have fewer children, and the government encourages the use of contraceptives (though it does not encourage abortions).

China's family planning policies are among the most advanced in the world. Contraceptives of all kinds are available, as are abortion and sterilization operations, and the network of barefoot doctors and other personnel are well-equipped to assist and educate people. There's a great deal of international interest in China's population planning system.

Major problems in Japan include urban migration and the aging of the population. We are concerned about how to redistribute population and industry more evenly between the urban and rural areas. China faces the same problem. An interesting note is that our third overall development plan, recently approved by the government, includes as a central point a concept partially borrowed from China — "dingju," or the development of industries and retention of population in the countryside.

I have proposed that demographers of our two countries conduct comparative studies of population changes and economic de-



velopment in Hokkaido, Japan and in China's northeast, as these two regions have many similarities in geography and resources. Such research would benefit us both. I am very happy that China and Japan are able to cooperate and conduct exchanges.

China's agricultural population makes up 70 to 80 percent of the total, and in rural areas there exists the problem of obtaining a complete education. Population and education are not the same problem, but they are closely interrelated, and should be coordinated.

DR. OW CHIN HOCK, chairman of the delegation from Singapore:

Most people in Singapore are beginning to accept the premise that the more children born, the less there will be for all of us to share. Singapore is a city-state, with its population concentrated on some 620 square kilometers of land. The rate of population growth has fallen from 46 per thousand in 1957 to 12 per thousand at present. Our next objective is to attain zero population growth by the year 2030.

In the past ten years and more, Singapore has told its people that if they want their children to live well, they must reduce the number in each family. The aim is to raise people's standard of living. This means more than just material possessions; it also includes education, health care, housing and social welfare.

It is true we have a strict system of rewards and sanctions, but at



Dr. Ow Chin Hock.

the same time the concepts I have just mentioned have taken root in people's minds and young couples go voluntarily to family planning agencies.

China's population planning seems to be quite successful. But the base figure of the population is still quite large, and 80 percent of the people are in the countryside. Since China's agricultural economy is based on labor power, population planning in rural areas must begin with the mechanization of agriculture.

The Chinese are now pursuing an excellent agricultural policy; the responsibility system, which is bringing more economic benefits to the peasants. Reliance can-

not be placed purely on the enthusiasm of the early post-liberation years. If the present generation is not able to see tremendous changes in their material life, at least they can be assured that the next generation will. That is to say, the interests of the state and the individual should be integrated.

Some people hold doubts about China's modernization program. But I don't see it that way. I think your leadership strata has new successors whose principle it is to raise the living standards of the people. China also has great potential in terms of material and population resources. If China has a stable political line, assimilates advanced technology and rationally uses the resources just mentioned, she can become a very strong country in twenty years' time.

RATTANSINGH RAJDA, Indian parliamentarian:

Your government has made convincing efforts to control population growth, a problem about which all of us are concerned. China has put forth the goal of one-child families, and it remains to be seen whether this can be carried out in the long run.

In India, our system is one of persuading people not to have more children. We believe in persuasion. We believe in convincing people that it is in their own interest to have fewer children. We had a slogan "Two or three children are enough." Now we say not

(Continued on p. 72)

The UN-sponsored Asian Conference of Parliamentarians on Population and Development meets in Beijing.

Photos by Zhang Shuicheng



China's Growing Computer Industry

PENG JIANCHUN

FEELING ill, a worker drops in at the Hospital of Chinese Traditional Medicine in Beijing. The doctor who sees him, drawing on techniques developed over thousands of years, takes his pulse, asks him a number of questions, and proceeds through the traditional repertoire of examination. Then he turns to a computer terminal and taps out the results on a keyboard. Presently a teleprinter begins to click and out comes a

puter came up with the same diagnosis as the physicians themselves 95 percent of the time, and now other doctors' specialized knowledge is being programmed into the machine.

Still more remarkable is the recent appearance of a computer-controlled laser editing photocomposition system which provides an extremely fast and efficient way of typesetting Chinese characters. Developed by Associate Professor Wang Xuan and several colleagues at Beijing University, the system uses advanced technologies that make possible a high degree of information compression and high-speed retrieval to compose the almost infinite variations of the Chinese written characters. Different typefaces and sizes can be set at a speed of 100 characters per second; lines and pages can be composed automatically. In theory and function the system is at the top of its class world-wide, and its use will greatly advance book, newspaper and magazine publication.

the 60-odd scholars and engineers brought to Beijing from all parts of the country to participate in a project to develop computers, some specialized in physics, others in mathematics, but the majority had never even seen a computer.

One of the few who had worked with them abroad was Wu Jikang, now vice-head of the Computer Institute of the Chinese Academy of Sciences. Only 38 at the time, he was made one of the technical leaders of the group. Wu had been an outstanding student at Tongji University in Shanghai, and after graduating had won a scholarship to study radio technology at the Danish Technical University. He returned in 1953 fired with the ambition to serve his country through science.

In a hostel in Beijing's western suburbs, members of the group began to study pulse technology, logic circuits and programming. They read up on computer technologies in other countries and after a period of assimilating what they had learned, set about making a computer. The work went forward at an intense pace. Wu Jikang and others of the group went in rotation to live and work at the Beijing Wire Telegraphy Factory, which had undertaken to manufacture the computer.

China's first electronic computer was completed in the autumn of 1958. Its chief elements were electronic tubes and the main memory bank consisted of magnetic drums, which made for slow calculation. Soon another computer was on line, capable of 10,000 calculations per second by means of 4,200 electronic tubes and 4,000 transistors. The main body occupied a space of 200 sq. m, the power source and



Shanghai railway clerk operates a computer-controlled ticket-selling machine.

sheet listing the patient's symptoms, a diagnosis of his condition, and a prescription.

Computers are finding their way into all aspects of Chinese life. The medical computer mentioned above has been programmed with the diagnoses and treatments of two practitioners of traditional medicine, one a specialist in liver disorders and the other in internal medicine. Computer-aided diagnosis has been tried on an experimental basis with 2,000 patients. A check showed the com-

Starting from Zero

The birth of China's computer industry is linked with the name of China's late Premier Zhou Enlai, who at a 1956 meeting first called for research in and manufacture of electronic computers. The following year, presiding over the draft 12-year program for science and technology, he placed electronic computers among the four major development priorities.

At that time, computers were an entirely new field in China. Not one university in the country offered courses on the subject; computer scientists and technicians were few and far between. Among

PENG JIANCHUN is a staff reporter for *China Reconstructs*.



Beijing's Hospital of Traditional Chinese Medicine has begun to use computers in diagnostic work.

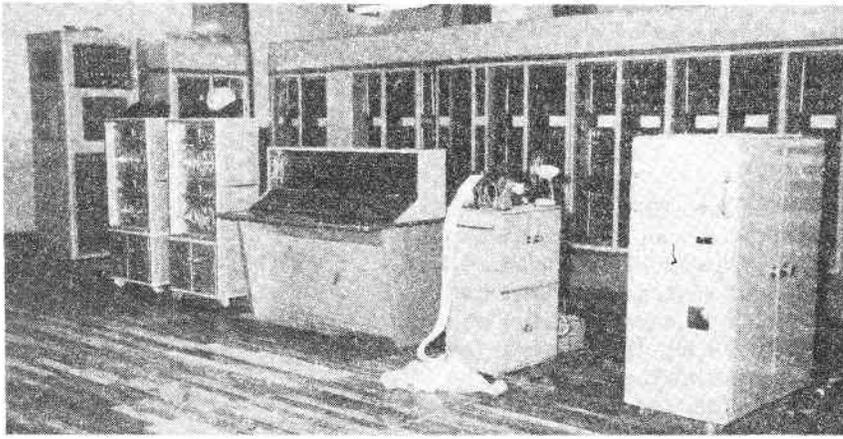
Shanghai-made minicomputer combines the functions of a computer, amplifier, tape recorder and TV set.



A minicomputer is part of a new photocomposition system that has greatly speeded the process of typesetting Chinese characters.

Photos by Liu Chen





Large general-purpose computer designed and made in China.

other accessories another 200 sq. m. or more. It was this computer — cumbersome and unwieldy by today's standards — that opened the door for China's computer industry. It was first used on April 14, 1959, to calculate designing tables for underground waterways in northeast China and soon it was being applied in a number of areas related to economic construction and national defense.

Setbacks and Advances

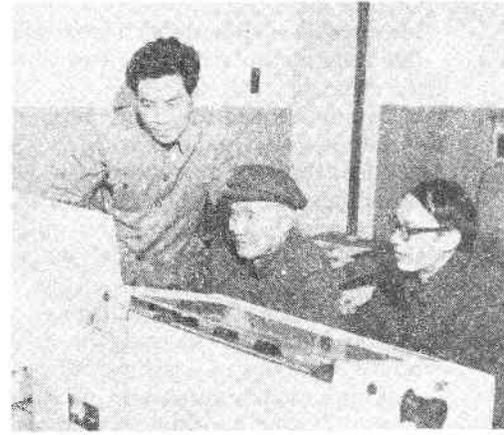
The first generation of computers used mainly electronic tubes. These were followed in the mid-1960s by a second generation of transistorized computers, and by a third generation, in the early 1970s, using chiefly integrated circuits. This rate of advance was fairly rapid. But it was attained partly by a one-sided emphasis on research, hardware and main components while neglecting manufacture, software and necessary accessories. So these succeeding generations of computers were hardly more useful than flowers in a vase: few went into mass production and fewer still found widespread application.

The turning point came when an August 1974 national conference of computer experts summed up past experience and determined that much more emphasis had to be placed on developing standard lines of computers which would have

many general applications. The establishment of the State Bureau of Computer Industry and the Computer Commission provided research and industrial departments and institutes of higher learning — the three main forces in computer research and manufacture — with points of assembly.

Subsequently, the DJS 100 series computer began to appear. It was jointly designed and manufactured by Qinghua University, the Chinese Academy of Sciences, the Tianjin Wireless Technology Research Institute, the Beijing No. 3 Computer Factory and a dozen other units throughout the country. The same group produced the DJS 180 small computer series, the DJS 200 large computer series, the DJS 050 and 060 minicomputer series, and the DJM 300 analog computer series. Some twenty or more types of peripheral equipment have also been produced, including paper tape readers, line printers, magnetic tape machines, magnetic dish machines, plotters and CRT (computer readout terminal) displays.

In the autumn of 1981, a national computer sales exhibition was held in Beijing. Some 1,800 sq. meters of floorspace were covered with computers of various sizes and functions. CRT screens flashed sharply defined letters or multi-colored graphs and designs. The hall also contained a varied assortment of "distant relatives"



Professor Wu Jikang guides younger colleagues in research on minicomputer systems.

and accessories for computers. The 200 or more exhibits were the products of some 90 research and production units throughout the country.

Today China has more than 100 computer research and manufacturing units employing more than 70,000 people. Production is between 500 and 800 large computers annually, together with some 7,300 accessory units. The Chinese computer industry has come a long way from that first group of computer designers who had hardly seen a computer.

Popularization

As Director Li Rui of the State Bureau of Computer Industry points out, present emphasis is on applying and popularizing basic research as quickly as possible, thereby promoting developmental research, applications, technical service and product marketing. Software centers for each series of computers have been set up in Beijing, Shanghai, Tianjin, Anhui and Liaoning to ensure that the computers sold provide optimum service to users.

There have also been marked improvements in computer reliability and substantial reductions in selling prices. The China Computer Technology Service Company now has branch units in a dozen provinces and cities. More than 90 computer factories have instituted

technical service departments to facilitate popularization and application.

Computers are no longer limited to laboratories and scientific institutions; they are increasingly to be found in industrial, agricultural, commercial, educational and military establishments. Some examples:

The Shanxi Textiles Mill uses a computer-control system for jacquard weaving of artificial fibers, making possible automatic alternation of flower and animal designs.

The Xi'an Coal Mine has applied computers to environmental monitoring in the mine and to control of mine hoists for greater safety.

The Shanghai Telegraph Office uses a computerized automatic telegram relay system (there is no direct telegraph service between some regions) which has shortened the time for relaying a telegram from an average of 45 minutes to 2.7 minutes.

The Dagang oil field has automated the management of oil extraction with a computer.

A computer at the Shaanxi Agricultural By-Products Company has automated the process of recording weights and prices in the buying of cotton and other products.

A computer at the Fuchunjiang hydropower station in Fujian province forecasts flood peaks and thus helps to increase the power station's generating capacity.

Computers are now earning their keep in every area of Chinese society, and their quality is improving. Computers capable of 2 million calculations per second are already in use. Large ones able to do 5 million calculations per second have been developed, and still faster ones are being designed. Some 3,000 computers (300 of them imported) are being used to good effect in different branches of the economy, while at least 50 institutes of higher learning offer courses in computer technology. True, China's computer industry is still young and lags well behind those in the industrially developed countries. But the gap is being narrowed. □

The Strange Life Cycle of the Caterpillar Fungus

CHEN MENGLING

AN ancient Chinese book of plant lore calls the caterpillar fungus "winter worm, summer grass" and says that it "lives in the soil in winter, has hair, and wriggles. During the summer the hairs appear on the surface of the soil and the worm turns into grass." Biologically, of course, a fungus is neither grass nor worm, but the ancients were not far wrong about its external appearance. That it was noticed and described so carefully is a reflection of its age-old importance in traditional Chinese medicine.

The "wormlike" stage of the fungus occurs because it is a parasite on the vegetable caterpillar for much of its life cycle. The process begins around the middle of August, when the fungus spores are scattered on the wind. The spores attach themselves to the caterpillar larvae, which burrow into the ground to hibernate during the winter months. The fungus develops hyphae, or thread-like tendrils, through which it absorbs nourishment from the caterpillar's body. During the early phase of the fungus' parasitic existence, the caterpillar is still alive and mobile—hence the "wriggling worm" description; later it is sucked dry until only a dead shell is left.

In early summer the mature fungus grows a small rod-shaped appendage which extends above the ground—this is the so-called

Tibetans gathering the fungus.



Specimens bred in a laboratory.



The caterpillar fungus.

summer grass. The top of the structure contains tens of thousands of spores, which are later released to begin the cycle all over again.

THE caterpillar fungus grows in mountain scrubland or in grassy marshlands where the soil is fertile, porous and cool. In China, its range is mainly in the Sichuan, Gansu and Qinghai provinces and the Tibetan Autonomous Region. April and May, when the grass-like appendage emerges from the soil, is the best season for picking it, and at that time of the year gatherers of traditional medical plants may be seen climbing high mountains in search of the fungus.

An ancient medical text claimed that the fungus's medicinal value was comparable to ginseng's. Modern practitioners believe that its 7 percent cordyceptic acid content is effective in alleviating tuberculosis, anemia, nocturnal seminal emission and lack of body warmth in old age. In some places people cook it with chicken, duck or other meats.

Traditional medical experts have now processed an extract of the fungus combined with chicken, and this patent medicine is popular at home and abroad. Adherents swear by it as a tonic to enrich the blood, increase energy levels and strengthen muscle and bone. □

CHEN MENGLING is an assistant researcher at the Botanical Research Institute of the Chinese Academy of Sciences.

Two Rural Factories

PENG XIANCHU

TRADITIONAL Beijing enamelware uses copper plate for the body, enamel glazes made of powdered pigment and is fired many times at high temperature until it is perfect. The objects are mainly ornamental.

Unfortunately, the "cultural revolution" early banned art enamelware as "luxuries of landlords." Shops were closed and craftsmen criticized. This lasted until 1976 when the ten-year fiasco was halted.

Complaints of foreign businessmen unable to find art enamelware spurred the old Beijing Handicrafts Import and Export Company to restore the production of such ware as quickly as possible. In early 1978 the company located Guo Zhenhua, a veteran artisan who had been sent permanently to the countryside in 1966. He was delighted to return to Beijing to resume a craft he had learned since childhood. The company then consulted the Yongfeng commune outside the city, asking whether it could build an art enamel factory on the basis of its experience in running a *cloisonné* factory. As a matter of fact, the technique and raw material for the two are similar.

Soon the Huaying Enamelware Factory was set up in the commune's Tundian brigade. It began with 15 workers and staff members, six transferred from the *cloisonné* factory and 8 newly recruited from the brigade. Guo Zhenhua became its director. As one of the main processes is painting and designing, Guo first taught his workers to master this art. He supplied his own albums of landscapes and figures, and an atlas of beautifully illustrated fairies and enamelware designs



Painting enamelware.

that he had kept for many years. Moving in to live and work at the factory, he taught enough in half a year so that he and the workers were able to start trial-production.

Without enough tools at first, they managed to put together a coal-burning kiln. It couldn't reach the required temperature and coal dust spoiled the ware. In May 1979, with a small electric kiln, they began production of a few articles.

Sometimes Guo and the workers stayed on the job around the clock, for example in the delicate process of gilding the rims of articles. The first gilding took place at midnight. When the elegant article was finished, everyone cheered. When they took it to the company the next day, it was pronounced up to standard. Traditional enamelware was being made again after 13 years.

Today, with a large electric kiln they made themselves, the workers are producing many articles of increasing quality standards.

EMERY CLOTH ASSEMBLY LINE

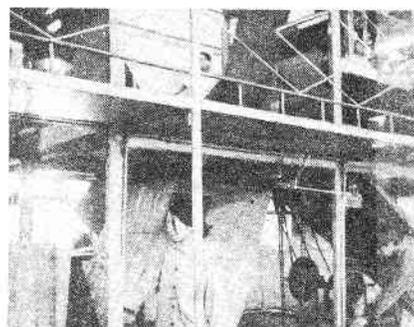
The Dongsheng commune near Beijing set up an emery cloth

factory 20 years ago. Its forty workers only had two cauldrons for boiling glue and bamboo poles for drying the emery cloth in the sun. Cutting the cloth, applying the glue, spraying the emery powder and drying were all done by hand. In 1963 machines, made after workers had gone to learn from factories in Tianjin, Shanghai and other cities, were used. These did starching, spraying, cutting and drying.

The "cultural revolution" stopped all this. But in 1978 they reconditioned their machines and linked them together to form an assembly line. Zhang Jingbao, 31, vice-head of the factory, had studied in the Qinghua University for two years and majored in machine building. He led a nine-member technical innovation group for the job. First they went to large factories to study advanced technology, then they began drafting plans for their assembly line. It was winter. In spite of the cold, they often worked until midnight. With no crane, they lifted equipment and machines by hand.

Six months later the 30-meter assembly line was operating, with workers only supervising the machines — tribute to their initiative and creativeness. The Dongsheng commune's emery cloth now crosses oceans to be sold in various parts of the world. □

Assembly line at the emery cloth factory. Photos by Peng Xianchu



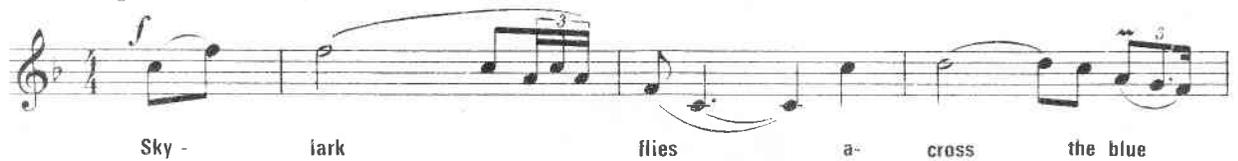
PENG XIANCHU is a staff reporter for China Reconstructs.

I Love You, China

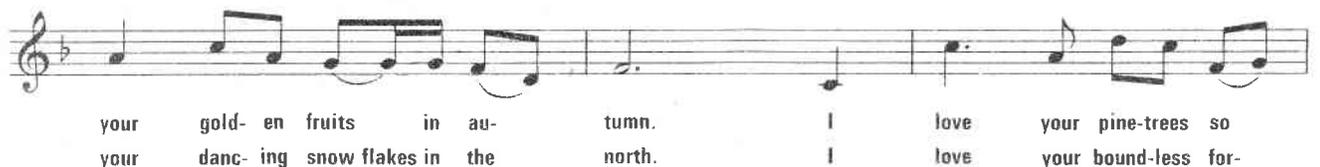
From the film 'Story of a Returned Overseas Chinese Girl'
(Female Solo)

Words by Qu Cong
Music by Zheng Qiufeng

Larghetto, con rubato, Lauda



1. I love you Chi - na, I love
2. I love you Chi - na, I love



green, I love your red plum blossoms, I love your sugarcane so
ests, I love your lofty mountains, I love your glittering small

sweet, like honey milk refreshing my heart, I
streams, their lovely ripples floating o'er my dreams, I

love you, China, I love you, China! Beautiful
love you, China, I love you, China! Beautiful

songs I will sing to you, My mother, oh, my mother -
youth I will give to you, My mother, oh, my mother -

land!

land! Ah! Ah! My

youth I will give to you, My mother, oh my mother - land!

Translated and adapted by Hu Shiguang

Solving Neighborhood Disputes

ZENG SHUZH

An old Chinese proverb says, "Even an upright official finds it hard to settle a family quarrel." Today, people's organizations mediate such disputes. Local mediation committees, though not official, are often more useful than the courts.

This reporter went to the Shizheng Mediation Committee in the city of Tianjin to see how it works. Its members, housewives and retired workers, receive no remuneration but go day or night wherever they can help in a dispute. Solving many of them, they lessen the burden on the courts and prevent quarrels from getting worse. Tianjin has 5,081 such groups. In 1980 alone they settled 72,800 cases, six times more than those handled by the lower courts.

'Her Royal Highness'

The chairwoman of the Shizheng Mediation Committee is sixty-year-old "Mother Zhang" — Sun Shuzhen. In the early days after liberation she became head of the local residents' committee. Loved and respected by her neighbors, in 1973 she was elected leader of the mediation committee.

Shizheng is a new workers' residential area. It has 535 families with 2,561 people. Most everyone works for the Municipal Construction Department. The mediation committee has five members. In addition, each row of apartments selects one mediator, approximately one for every ten families.

How do such mediators work? A quarrelsome woman named Mu Shuqin gives us an example. Always proclaiming others' faults but finding none in herself, she was nicknamed "Her Royal Highness." If someone littered

the ground or spilled a little water near her doorstep, she was sure to swear at them. Once some repair workers piled materials outside her door. She cursed them out royally, making them so angry that they refused to work and went away. Another time, she answered the neighborhood phone and without provocation scolded the caller. Though the person had important business, he didn't call back. The neighbors simply didn't know how to deal with her.

The mediation committee got the residents together to discuss a "unity pact" which included articles to insure good-neighbor relations, family harmony, education of children and sanitation. Everyone at the meeting had their eyes on "Her Royal Highness." When she cleared her throat, the people strained to hear what she would say. "Anyone who breaks this pact should make a public criticism of herself," she declared. There was a roar of applause!

Public pressure overcomes many troubles. Once a fifteen-year-old boy hit Mu Shuqin's eight-year-old son and broke a window in her house. Ordinarily this would have brought a stream of abuse from "Her Royal Highness." But this time she went to the mediation committee and, together with the boy's parents, the whole thing was settled. Furthermore, each party resolved to educate their children better. Mu Shuqin began taking all her disputes to the committee. Once she was wrongly accused by a neighbor. After mediation, the offender apologized. She was so pleased that for days she was telling everyone about it. Mu Shuqin stopped being so haughty and hotheaded — and recently she was chosen by her neighbors to serve on the mediation committee!

One of the Zhai family's sons fell in love with the Li family's daughter. The girl's father disapproved because he thought the man too old for her. The two took out a marriage license anyway. When Mr. Li found out, he threatened the man and vowed never to consent.

The Zhai family was outraged. How dare the Li family interfere! They decided to fight it out. The Li family also gathered for battle.

Enemies into Friends'

When Mother Zhang heard of it, she went at once to the furious Zhais. The house smelled of alcohol. Clubs stood behind the door.



Sun Shuzhen has won the love and respect of local residents as chairwoman of the Shizheng neighborhood mediation committee. Zhang Jingde

Young men were sitting around drinking. Mother Zhang boldly entered the room and began to explain the Marriage Law and that young people had the right to pick their own partners. Violence would only lead to bad consequences. She was very persuasive and the Zhais finally consented to mediation.

Mother Zhang then went to the Li family. Here, the house was also packed with friends and relatives ready for war. Her patient explanations also quieted the Lis down and those who had come for a fight slowly went away.

Over the next few days the committee visited each family several times. Both were complete

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ly won over by the patient woman. The Zhais' son was persuaded to call on his future mother-in-law and to make up with the Li family. He invited his prospective father-in-law to visit his family. When the formerly irate father arrived for the visit, all was forgiven and he agreed to the marriage.

Mending Humpty Dumpty

Almost a year's hard work went into resolving the threatened divorce of a couple in the neighborhood, Rong Guangren and Liu Shuqin.

Mother Zhang took me to visit this family. Their apartment was ordinary but neat and clean. Guangren had worked the night shift and had just gotten up. He was out in front of the apartment building watching his small son and daughter play. I was struck by his stocky build, a sharp contrast with his tall, slender wife, Shuqin, who was busy in the kitchen.

Guangren's mother, who lives in the next apartment, came over to greet me. She explained, "Mother Zhang racked her brains over the quarrel between my children. If it weren't for her mediation, our family would be very

unhappy." As she talked, Guangren only half looked at his mother, smiling from embarrassment. She continued, "Our daughter-in-law is really capable. It's just our son who was unreasonable. Oh well, everything's alright now." As I sat down, Shuqin poured tea for me with a faint smile.

The couple had been married six years before when they were both working in Tianjin's southern outskirts. One day three years later, Guangren was asleep after coming home from his night shift. Their little daughter, not even a month old, wouldn't stop crying. This disturbed his sleep and started a quarrel between the couple. Guangren slapped his wife. Infuriated, she picked up the baby and went to live with her parents. Shortly after, she filed for divorce.

The court tried three times to reconcile the couple but without success. Finally it decided to grant the divorce since the couple had already been separated for half a year and the wife's uncle, who was serving as her counsel, supported the divorce. Now the mediation committee, which always sends observers to court hearings involving local residents, objected.

The committee had noted that the wife cried bitterly whenever she answered questions, but never accused her husband in any way. Her uncle, however, constantly pointed out the faults of her husband. When the court recessed, both man and wife broke into tears.

The committee then was sure that the marriage could be saved. Furthermore, they suspected that the uncle was motivated by the desire to get some money and was the main obstacle. The court agreed with the committee to hold off the divorce verdict.

The mediation committee now talked with the parents of the Liu family. They also visited the factory where Guangren worked in order to get its cooperation. Finally tensions eased. The wife had long hoped for a reconciliation. Now the committee suggested that the husband write a letter of apology to his in-laws, including the uncle. He did so—but received no answer.

"We didn't lose heart," Mother Zhang said. "Two members of our committee, with Guangren and his younger sister, went to visit the Liu family. When we arrived, Shuqin's mother started cursing Guangren." After she ran out of steam, Mother Zhang talked to her privately, patiently explaining that the two had married out of free choice and with two lovely children their life could be good. Should such a small matter be allowed to destroy a happy family? Could Shuqin find another husband with whom she would be so compatible? If another husband was not as good as the first one, her daughter would blame her for the rest of her life. The mother listened attentively but was too proud to consent immediately. She asked to be paid for Shuqin's living expenses for the past eleven months.

Finally, toward evening, she acquiesced to her daughter's return to the Rong family. Shuqin was overcome with joy. She promptly gave her husband their baby girl to carry and they returned home together. □

On the verge of a divorce that neither really wanted, this couple were reunited through the efforts of their local mediation committee.

Zhang Jingde





The Anymaqen Mountains

WANG WENYING

MT. ANYMAQEN in eastern Qinghai province is 6,282 meters (20,610 feet) above sea level. In a range 200 kilometers long and 60 kilometers wide, it is surrounded by 40 advancing glaciers. Since being opened to foreigners in 1979 it has attracted 15 foreign mountaineering teams and spurred Chinese and foreign scientific research. Last June a Chinese-West German team of scientists made a 21-day on-the-spot investigation of the glaciers.

Environment

The Anymaqen Mountains are part of the eastern Kunlun Range

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near where the Yellow River makes a ring-shaped turn. Mt. Anymaqen, also called Mt. Jishi, is the highest peak; two sister peaks to the southeast are 6,268 and 6,090 meters, and some 18 others reach above 5,000 meters. Rising perennially snow-capped into the sky, they look like guards of the gateway to the Qinghai-Tibet Plateau. Yaks and sheep graze below 4,500 meters. Along the Huanghe (Yellow) River are forests and tracts of fertile farmland.

Most of the Anymaqen glaciers, as shown by aerial and satellite photographs and on-the-spot surveys, have been advancing during the past few decades at speeds ranging from 5 to 83 meters a year. The nine-kilometer Halun Glacier has moved 790 meters since 1966 and is still advancing. Spectacular ice pyramids and curved structures

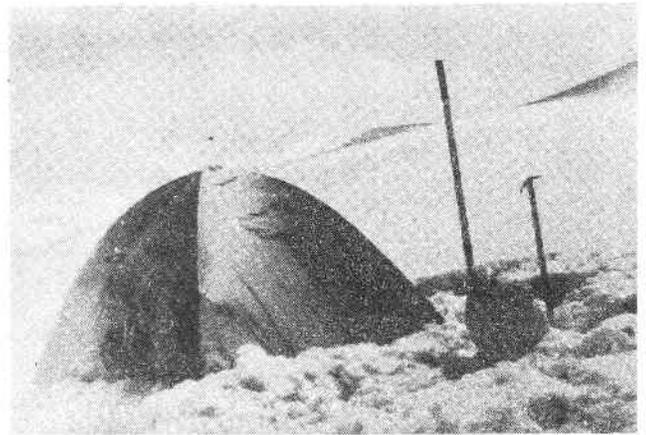
called ogives are found here, typical of glaciers that move suddenly and violently over short periods of time. This phenomenon is different from the glaciers of the Qilian Mountains not far from the Anymaqens, but similar to some glaciers in the Himalayas and the Kala Kunlun Mountains.

The Halun Glacier

The density of the Halun Glacier is 0.89. The temperature eight meters deep is -6.5°C . The height of the snow line on the northeast slope is 4,900 meters, on the southwest slope 5,200 meters. Precipitation is in direct proportion to the height, and the annual average near the snow line is 800 mm. The glacier's melting volume is inversely proportionate to its height. The annual melting volume at the end of the ice tongue, measured in



Professor Hoffman, German team leader of the Chinese-German joint investigation team, examines geological features at a glacier's edge.



Campsite in the snow 5,300 meters above sea level.

Halun glacier near Anymaqen's
second highest peak.

Zeng Shusheng

Below: Chinese and German
scientists measure the Halun
glacier's rate of advance.

Zeng Shusheng





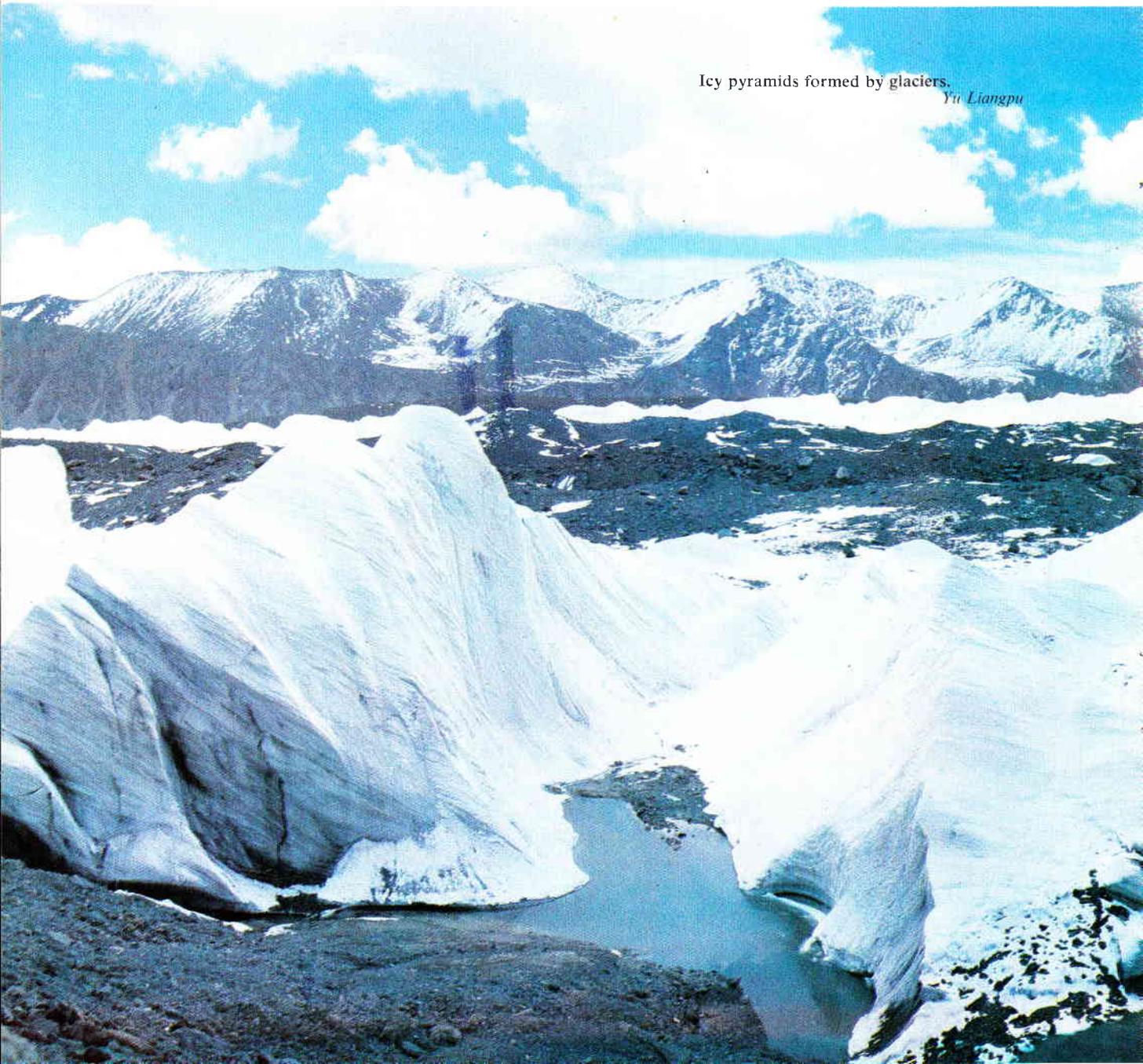
Meconopsis horridula (a variety of poppy) adds splashes of color to the landscape.

Yu Liangpu



Arenaria

Yu Liangpu



Icy pyramids formed by glaciers.

Yu Liangpu



Tibetan herdsmen.

Photos by Wang Wenying

water depth, is about 10 meters. The melting volume above the snow line is usually equal to the precipitation, about 800 mm.

Four cross-section observations on the Halun Glacier reveal a high-speed area three km. from the end of the ice tongue. Here the rate of advance is 83 meters a year. Yet only one kilometer below, the maximum speed is little more than five meters a year. The different speeds in these two areas cause pile-ups and force certain parts of the glacier upward. The overall forward movement should last for 10 to 20 years and thus will involve increased melting of the ice. Because melting involves the absorption of large quantities of heat, this suggests that the weather in the Anymaqens will tend to grow colder.

History

The earliest reference to Mt. Anymaqen is in *Yu Gong*, a book written 3,000 years ago. During the Han Dynasty (206 B.C.-A.D. 220) it was called Mt. Qinghai. In the Tang dynasty (618-907) it was the Great Mt. Qinghai. In the Yuan dynasty (1271-1368) it was Mt. Yiermabumoci. Early Tibetan writings mention Mt. Anymaqen as "Maqensipola". Later, the Tibetans added *Any* to it to express their respect for the mountains. *Any* means "ancestor" in Tibetan and

Maqen means "highest attendant of a Living Buddha."

Maternity, Child Care

(Continued from p. 23) training, many were limited by lack of general education and medical knowledge. Some were persuaded to retire, others kept on with additional training. Meanwhile, a corps of 5,000 women barefoot doctors were chosen for specialized training in childbirth and prenatal care, and these are now the main force in the prefecture's maternal and child care network.

Today one of these barefoot doctors is stationed in each brigade. They are strictly trained in scientific delivery methods and instrument sterilization. They give regular examinations both before and after birth, thus discovering and dealing promptly with conditions that might endanger the health of mother or child. All are proficient in normal deliveries, and a good many can handle breech and feet-first presentations, give first aid to suffocating newborns and suture ruptured perineums. They have been trained to keep careful clinical records for future medical reference.

Childbirth still usually takes place at home, but for more complicated deliveries commune clinics are available. A number of brigades now have their own

In the 20th century new chapters have been added to the history of the exploration of the Anymaqens. In 1922 British Brigadier John Pirera spotted them during an expedition. He estimated the highest peak at 7,600 meters. In 1926 the American explorer Josef F. Rokku attempted to climb Mt. Anymaqen but got only as high as 4,900 meters.

From 1934 to 1946 at least eleven teams attempted the mountain, none succeeding. In 1949 the American Leonard Clark explored and surveyed the Anymaqens, and set the height of Mt. Anymaqen as 9,041 meters — causing a sensation among mountaineers, for this would make it higher than Mt. Qomolangma (Mt. Everest). Later more scientific measurements placed the true height at 6,282 meters. □

obstetrical wards with simple delivery tables, high-pressure sterilizers and a room with a *kang* which provides enough space for three or four new mothers to rest here for a week before going home, while the barefoot doctor cooks their food and looks after them. No fees are charged for deliveries; the cooperative medical system covers all costs.

Before the new system, childbirth-related death rates were relatively high. In 1972, because of poor sterilization by midwives, some 355 babies (.19 percent of newborn in the prefecture) died of tetanus. In 1979 there was only one case of newborn tetanus in the whole prefecture. In the same period the overall newborn death rate fell from 1.2 to .77 percent, and for mothers in childbirth from .42 per thousand to .19 per thousand (the latter figure is well below the rate for most rural areas and comparable to that found in large cities).

The rural areas in general have some way to go before they can match Yantai's record in child and maternal care. But Yantai's experience is a good example of how changing material conditions and attitudes and dedicated efforts can combine to give children a better start in life. □

Country Fairs and Free Markets

WU YUANFU



Traditional-style dried milk 'skins' are marketed by commune members of the Bai nationality at a fair in Shaping, Yunnan province. *Zhou Zhongyao*

IN China there are over 37,000 fairs in the countryside and 2,000 free markets in the cities selling agricultural and sideline products. These did over 700,000,000 yuan of business in 1981 — about one percent of the volume of the regular state-owned commercial networks.

Prosperous rural markets are important to the national economy. With economic readjustment and more flexible farm policies, an active multi-channel economy has developed over the last three years. State-owned stores form the backbone, aided by rural fairs, free markets and individual sellers. In 1980, purchasing power in the countryside increased by more than 25 percent.

Of China's billion population, 800 million are peasants. They produce all the country's staple and non-staple foods. Seventy percent of the raw materials for light industry and textiles comes from the countryside. Agricultural and rural sideline products account for 30

percent of China's exports. On the other hand, the rural areas are the biggest market for China's industrial products — textiles, daily necessities, consumer goods, fertilizers and farm machinery.

Main Rural Commerce

Supply-and-marketing cooperatives are the principal commercial organizations in the countryside. Staple grain is purchased by the state, but the co-ops buy almost everything else — from cotton and hemp through tobacco, tea and medicinal herbs to native products of various kinds. Through branches in brigades and production teams, they supply the peasants with tools, daily necessities and consumer goods. The total turnover of supply-and-marketing co-ops in the country is above 70 billion yuan a year.

Co-ops used to be collectively owned. They grew out of the war period when the Chinese Communist Party helped soldiers and civilians organize consumer cooperatives in the liberated areas. After 1949, co-ops were organized

with peasant shares. They expanded, funds increased and the proportion of investment from shares became less and less. Co-ops gradually developed into state-owned enterprises.

Based on the principle, "develop the economy and ensure supplies," co-ops not only make deals with the peasants but help them with production. Since 1976 the co-ops of Wangjing county in Jilin province, for example, have helped



peasants build mushroom farms, ginseng farms, fruit orchards and bee farms. The total value of agricultural and sideline products purchased in the county in 1980 was 9,000,000 yuan, an increase of 36.7 percent over 1976.

Co-ops not only help production but do their best to make things easier for the people. In busy seasons co-ops in border areas, on the grasslands, in forests or mountains often carry goods direct to the peasants' fields or worksites, even though this earns them less profit. They also deliver daily necessities to people who cannot easily visit the co-ops.

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Though the co-ops do a large amount of work, it is almost impossible to serve everyone adequately because China's countryside is vast, the population great, the variety of goods big and transportation insufficient. Thus, other channels are needed. This is the function of country fairs, free markets, trade warehouses, commission shops and individual sellers. Peasants now sell their homemade items and farm produce from their private plots at fairs held in communes, brigades, nearby towns or along roads. To ensure normal trade, fairs employ managers and provide stalls.



Country fairs have a strong local flavor. Sometimes they are connected with cultural events or sports. The Third-Month Fair in Dali, Yunnan province, for example, has grown into an annual fair and festival for minority nationalities. The Nadam Fair held on the pasture lands of Inner Mongolia in the summer includes horse racing, wrestling and songs and dances. The Mule Fair held in July every year in the Wutai Mountains in Shanxi province deals with livestock. Country fairs play an important part in stimulating economic exchange between town and country. For instance, in 1981 such

fairs in Anhui province accounted for 17 percent of the total volume of retail sales in the province.

Agricultural and sideline products in the free markets in the cities are mainly produced and sold by peasants from the surrounding countryside. These markets supplement state-owned commerce. In fact, in many cities half or more of the vegetables are now bought in the free markets.

The government does not set free market prices. These follow supply and demand. Generally speaking, commodities in good supply are sold close to state store prices or slightly higher, while items in short supply command bigger prices. State commerce still plays the leading role. One report from Anhui province says that city prices in 1981 decreased 10.7 percent and rural prices 11.96 percent.

Trade warehouses are attached to co-ops and commission shops to state-operated stores. These collect a service charge from communes, production teams and individual peasants for purchasing, transportation and stockpiling. They help find new sources of goods, stimulate the exchange of commodities and put producing and marketing departments into direct contact. Farms and communes are also permitted to build retail departments of their own in the towns to sell their agricultural and sideline products. Some 170,000



Rural purchasing power rose by more than 25 percent last year. These three families of Sata nationality in Qinghai province pooled part of their increased income to buy a hand tractor.

Fan Rujun

such shops and 230,000 individual dealers mainly handling catering, services and retail goods now exist.

Such multi-channel trade is conducted under the state plan. Grain, oil-bearing crops, cotton and industrial products, vital to the national economy and the livelihood of the people, can only be purchased by the state. They are allowed to be sold on the free market only if state quotas have been met.

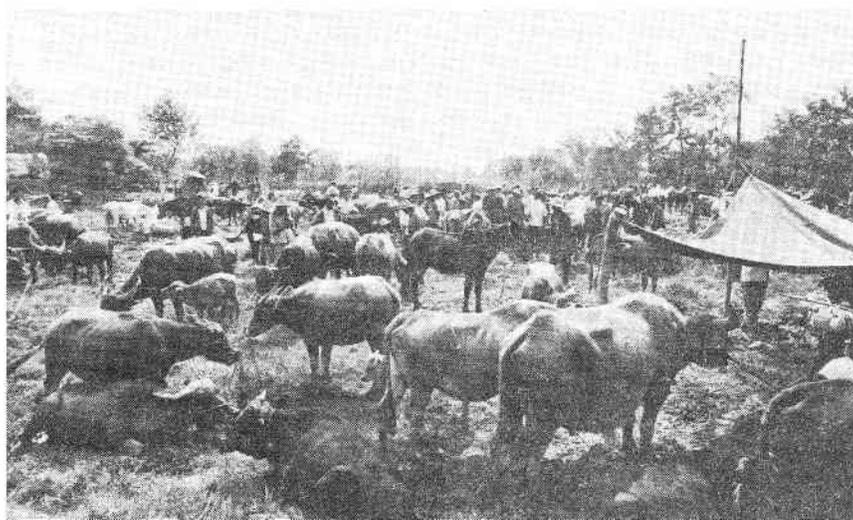
(Continued on p. 48)

Waterside stalls cater to fishermen at Yueyang on Dongting Lake, Hunan province.

Fang Weixuan

Livestock corner at a 'temple fair' in Anhui province.

Zhu Yunfeng



Zhao Yuanren— Pioneer Chinese Linguist

TIE YING and GUO BEIPING



Professor Zhao accepts the title of Honorary Professor at Beijing University from its president Zhang Longxiang.
Liu Shaoshan

IN 1910, 71 years ago, a young Qinghua University student from Changzhou sat down to take an examination. Of the 430 nervous young students taking the test, only a handful would be chosen to study abroad. In June 1981 Beijing University conferred on an American citizen the title of Honorary Professor. The recipient was a world-famous scholar of Chinese Linguistics, a distinguished teacher for 45 years, a musician and composer, and a patriot. That young student and the world-famous scholar are of course one and the same—Professor Zhao Yuanren, 88, now professor emeritus of the University of California and visiting China at the warm invitation of the Chinese Academy of Social Sciences.

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GUO BEIPING is a postgraduate student of journalism at the Beijing Broadcasting Institute.

Chinese is an ancient language with many dialects. At the beginning of this century many Chinese from various areas could not understand one another because of their different accents, yet no real scientific study of Chinese dialects had ever been made. While most common people spoke in the vernacular, the small educated elite employed the elaborate classical Chinese based on ancient literary models. Because it was so complicated, the written language was also virtually the property of the few who could spend many years mastering it. During the 20th century great changes have taken place in Chinese linguistics—the formal study of the language—and in the language itself. Prof. Zhao's life work is an integral part of these changes.

Scholar and Linguist

Though born in Tianjin in 1892, Zhao Yuanren moved to Changzhou at a relatively early age and to this day considers it his native city. At Qinghua University and later as an undergraduate at Cornell University in the U.S., he studied mathematics, physics and philosophy. But even as a child he had been a good mimic and interested in the sounds of the different dialects. Returning to teach at Qinghua in 1920, he was asked to interpret for British philosopher Bertrand Russell on his lecture tour of China. Wherever they went, he picked up local dialects very quickly, and his interest in the formal study of language grew. With the encouragement of friends and relatives, he went to France, Germany and Britain to study linguistics. Before he left he had met and married Dr. Yang Buwei, an independent young

woman who had refused to have her feet bound, repudiated the marriage arranged by her parents, and left home to study medicine.

Returning once again to China, he began the series of pioneer dialect studies which was to occupy him during the 1920s and 1930s. He thus became the first Chinese scholar to apply scientific methods to this area of research. His 1928 *Study on the Wu Dialects* laid out a clear methodology for work in this field that became a model for other scholars. Meanwhile, in 1925, he was appointed to the staff of Qinghua University's newly formed Research Institute of Chinese Studies, and later became head of the Linguistics section of the History and Linguistics Research Institute of the Central Research Academy.

Prof. Zhao was deeply influenced by the May 4 patriotic student movement and the movement for a "New Culture". He put his prestige as a linguist behind the call for greater use of the vernacular and for simplified written characters—moves that would promote literacy and open up to the masses of people the great range of ancient culture and new ideas. In 1922 he translated Lewis Carroll's *Alice in Wonderland* and *Through the Looking Glass* into idiomatic Chinese.

International Renown

In 1938 he returned to the United States to acquire his doctorate in linguistics at Harvard University, and later to teach there. During his long career of teaching and writing in the U.S., Prof. Zhao's fatherly warmth—and his wife's excellence as a cook—made their house a home away from home for visiting Chinese scholars.

His writings during those years included not just scholarly studies of language, but works that were of practical use to all those learning to read, write, and speak Chinese. His Chinese dictionary, *Grammar of the Chinese Language*, and *Reading Materials on Chinese* are only a few of his major publications.

To promote the popularization of *putonghua*, the national standard dialect established by the new People's Republic, Prof. Zhao wrote *The Chinese National Language for Beginners*, invented a system of romanization, and produced a series of records on *putonghua*. Today he is still at work on his monumental *Commonly-Used Characters* which will present 2,100 characters based on the major modern dialects and pronunciation systems, and which will allow the user to write both in classical and vernacular Chinese.

On his recent visit to China, Prof. Zhao happily noted the progress that had been made in opening up the entire range of the Chinese language to the masses of people.

Prof. Zhao's accomplishments as a linguist have brought him international renown. His academic posts and honors include the presidencies of the American Society of Linguistics (1945) and the Oriental Institute (1960), and a number of honorary doctorates. Lu Shuxiang — director of the Linguistics Research Institute of China's Academy of Social Sciences — identifies three major contributions for which Prof. Zhao will always be remembered: his contributions to the development of modern Chinese, his pioneering of new methods in Chinese linguistics, and his training of many of the most able younger linguists in China and the United States.

Musician and Composer

Professor Zhao's parents were amateur performers of *kunqu*, a form of local opera, and he grew up in an atmosphere of music. He learned to play the piano in his teens, and at university managed to squeeze courses in music into his busy schedule. Under the in-



Vice-Chairman Deng Xiaoping greets Professor Zhao and family. Zhang Guiyu

fluence of the May 4 (1919) student movement and the democratic revolution he wrote a number of patriotic songs which reflect the spirit of those times. His "Selling Cloth" and "Work Song" expressed deep sympathy for the oppressed workers and small independent craftsmen. Even his lyric songs such as "Autumn Bell" and "Listening to People Talking" were reflections of people's yearning for personal liberation and hopes for the future.

The words to his songs were written by many well-known writers and poets of the day, including Liu Dabai, Xu Zhimo, Shi Yi and Prof. Zhao himself. One song he wrote along with poet and linguist Liu Bannong — "How Can I Stop Thinking of Him" — is still popular in China after nearly half a century. In Chinese, the same pronoun can refer to him, her or it, and the "him" in the title really stands for all the things one can love and miss: old friends, one's home or motherland, and times past. On his 1981 visit to China, Prof. Zhao was asked to sing this song many times — which he happily did in his still melodious and expressive voice.

In the 1930s Prof. Zhao wrote the theme song for the progressive film *City Scenes*, about Japanese

aggression, and a number of other patriotic songs: "We Don't Buy Japanese Goods", "Resistance", "Self-Defense" and "The Awakening Lion Roars". Prof. Zhao's compositions have earned a place in the history of modern Chinese music, and his *Selected Songs* was published recently by the People's Music Publishing House. Although as he puts it he is now a drop-out from both linguistics and music, he keeps up with the Chinese musical scene. He admires many recent works, and has great hopes for the younger generation of musicians.

Sentimental Journey

In 1973 Prof. Zhao and his wife paid a three-month visit to China during which they were received by the late Premier Zhou Enlai. They often talked of making another trip home. Last March, after the death of his wife, the Changzhou city government sent him a message of condolence. Prof. Zhao was deeply touched that he was still remembered, and decided, despite his advanced age, to revisit his homeland once more, this time taking along his three daughters and two sons-in-law.

Their first stop was Nanjing, where Prof. Zhao showed his family the places where he had

studied and worked almost 40 years ago. They visited the Studio for the Engraving of Buddhist Sutras founded by his wife's grandfather. In high spirits, Prof. Zhao took numerous photos and hummed the songs he had composed there so long ago. At the Yixian-qiao Primary School, he sang from memory the old school song he had written for it.

Toward the end of May the party reached Changzhou, where a warm reception had been prepared by hometown officials. For the banquet, they even located the same cook who had prepared his food in 1973. The professor was delighted: "Today I have at last tasted real home cooking. I have seen the many changes that have taken place. *Mushu* (wooden comb) Street of the old days is now an 'electronics' street."

During their stay at Changzhou Prof. Zhao's son-in-law Bian Xu-cheng, a professor at the Massachu-

setts Institute of Technology, managed to locate his own family's ancestral home and burial places in the suburbs of the city. From these he learned that his forefathers had settled there some 250 years ago. On his death-bed, Bian's father had urged his children to go to China and explore their family roots, and Bian was happy to be the first of his generation to do so.

A great part of Prof. Zhao's life is tied up with Qinghua University, both as a student and a teacher, and his tour of its campus became an emotional journey into the past. He told his hosts how often he thought of his university days, and when it came time to leave he found it difficult to tear himself away. Toward the end of his journey he was received by Vice-Chairman Deng Xiaoping and told him how much he appreciated the great changes that had taken place in China since his last visit eight years before.

To his children, he seemed in better spirits during his stay in China than he had been for a long time: "Whenever I turned on the radio or TV, I heard the sound of my mother tongue. I can see the new look of my motherland. I can speak the local dialects with my relatives and friends. This is my real home." The only sorrow was that his wife could not share his journey. Before her death she had asked Prof. Zhao to scatter her ashes in the ocean west of Hawaii so that the waves could wash them gradually back to her homeland.

Since 1906 Prof. Zhao has faithfully kept a diary of events and ideas. It covers his work and personal life, domestic and international affairs, political events, appraisals of leaders in various fields and travel observations. Old friends and new can only hope that this rich lode of historic and human interest will be published. □

FAIRS, FREE MARKETS

(Continued from p. 45)

The state stipulates that goods which don't belong to the negotiated items must be sold at unified market quotations. This has restricted speculation, profiteering and price gouging.

Peasants' Purchasing Power

Multi-channel trade and the increasing purchasing power of the peasants is a reflection of the brisk trade of rural markets now in existence.

The national average income of the peasant rose from 117 yuan in 1977 to 170 yuan in 1980. Peasant savings deposits increased from 4.65 billion in 1977 to 12.06 billion yuan. Between January and July 1981 the state paid 15.3 billion yuan in cash for purchasing agricultural and sideline products, an increase of 29 percent over the same period of 1980.

In 1980 the total volume of retail sales of consumer goods sold in rural markets was 65.85 billion yuan, 21.1 percent higher than 1979. The present flexible economic policies have increased the commune members' enthusiasm for

production and raised their demand for their own tools and other means of production. Sales of fertilizer and farm chemicals have increased. Shellers, small hand-carts, waterwheels, cattle and donkeys have become best-sellers. Peasants are buying medium-sized farm tools and equipment.

Changes have also taken place in the purchase of consumer goods. Peasants, especially the young people, want better quality commodities: clothing in brighter colors, ready-to-wear things of dacron, terylene and wool. Radios are still popular in the countryside but now they want TV sets as city people do. Some are replacing *kangs* (heated brick beds) with real beds. Electric fans and wardrobes are in demand. Eggs and home-made pastries which have long been gifts of peasants when they visit their relatives or friends are now being replaced by drinks, cigarettes, cakes, candy and fruit. Beer and cakes are seen more frequently in peasant homes. There is a great demand for bicycles, sewing machines and wristwatches.

Despite the emphasis placed on the production of consumer goods,

the supply still falls far short of demand. According to an investigation in Xiajin county, Shandong province, this county of 100,000 families has 23,933 sewing machines, needs 42,359 more; has 76,888 bicycles, needs 41,730 more; has 7,363 clocks, needs 16,569 more; has 8,346 wristwatches, needs 15,023 more.

Building supplies such as lumber, steel, cement, glass, bricks and tile also fall short of demand. As the peasants' income increases, the first thing they want to do is to build houses and get married. Between 1978 and 1980, 900 million square meters of new housing went up in the countryside. Some 15 million families throughout the country moved into new homes. This figure is smaller than the actual demand.

The present shortages worry commercial departments and co-ops. But in the opinion of economists this is an encouraging situation. Under present policies, the increase of purchasing power of China's 800 million peasants will stimulate industrial production and the general economy. □

Xi'an Archaeology Shows

Progression of the Ages

HE ZHENGHUANG

XI'AN and its surrounding area was the site of the capitals of some of the most famed dynasties in Chinese history (see box) for more than 2,000 years. Its glorious past can still be savored from the many archaeological relics found there. In fact, in this single city one can see remains of man's progression over hundreds of thousands of years from earliest times through various eras of a glorious civilization.

Xi'an's Location

The fertile plain where the Huanghe (Yellow) River turns from flowing south to flowing eastward, provided good conditions for cultural development. The river valley is justly called the cradle of Chinese civilization. The Xi'an area was the home of one of China's earliest types of human being, Lantian Man, dating from 600,000 years ago and earlier than the better-known Peking Man of 500,000 years ago. A skull and stone tools were found at Lantian southwest of the city.

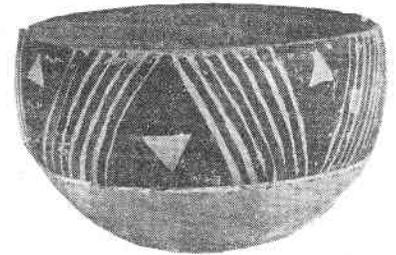
Xi'an was also a center of Neolithic culture. More than a dozen Neolithic settlements have been excavated nearby, including Banpo covering 10,000 square meters, the largest and best-preserved found so far in China, six kilometers east of

the city. Excavated in 1954-1957 after being buried for 6,000 years, the ruins have been treated with a preservative and roofed over as a museum of Neolithic culture.

The Banpo settlement was the home of one clan. Its separate dwelling area was surrounded by a defensive ditch six meters deep and equally wide. The ruins consisted of a large central house and more than 40 smaller ones. The children and elderly probably lived in the large house and the others in the smaller ones. The houses, of wattle and daub, were either square or round in shape; some were semi-underground. Banpo's was a matrilineal society. Judging from what we know of other such societies, there must have been special houses where the women received their male companions from other clans.

Remains of grain found in storage pits show that Banpo was a settled agricultural community. There were also stone knives, axes and arrowheads for hunting and defense. Hooks and fishnet weights suggest that fish must have abounded in the nearby Chanhe River. The distribution of food probably took place in the large structure supervised by the eldest woman.

Beyond the houses are the remains of pottery kilns and a cemetery. But when small children died, they were placed in pottery urns, apparently to protect their bodies



Painted pottery found with geometric design, Banpo Neolithic settlement.

from wild animals, and kept near the houses. The urns were covered, but a small hole was left open — to allow the spirit of the child to come out and mingle with the family, it is believed.

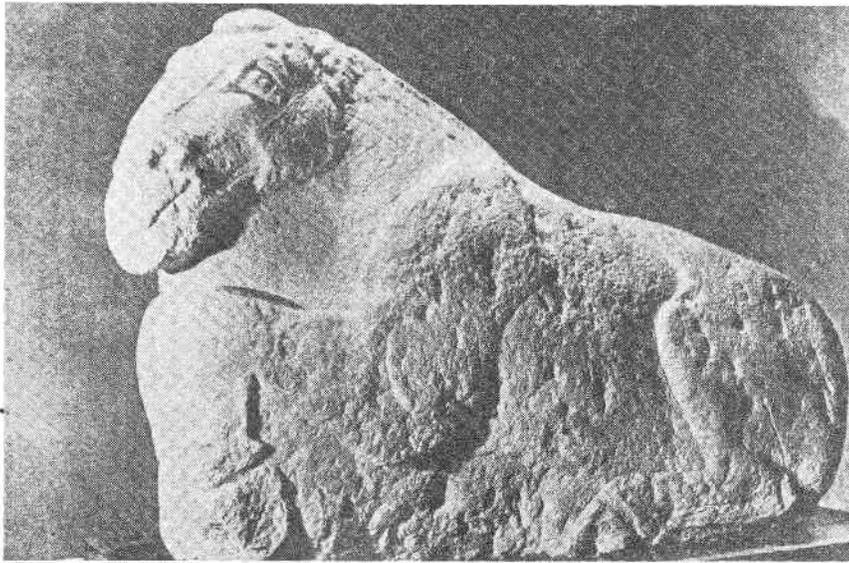
Banpo is typical of the Yangshao Neolithic culture, famous for its beautiful and lively pottery designs with animal motifs painted in red or black with hematite or manganese oxide. One of the most interesting, appearing on a bowl, is a fish accompanied by a human face. The latter may be an image of worship, the fish connected with the people's food-gathering activities. Handles on the covers of some of the vessels are in the shape of human or animal heads, representing the earliest plastic art found so far in China. Symbols and signs carved on the vessels may be the forerunners of today's Chinese characters.

Steamers made of pottery show that this was one way the Yangshao people cooked their food. A jar with a pointed bottom (amphora) used to fetch water indicates their understanding of the principle of the center of gravity. They used needles finely made of animal bone about the size of steel ones we use today, and beads of stone or bone.

HE ZHENGHUANG is chief of the exhibition section of the Shaanxi Province Museum.

Famous Capitals Around Xi'an

Western Zhou (Haojing)	11th century-771 B.C.
Qin (Xianyang)	221-206 B.C.
Western Han (Chang'an)	206 B.C.-24 A.D.
Tang (Chang'an)	618-907



Stone horses carved for the tomb of Western Han's general Huo Qubing



Bronze Culture at Haojing

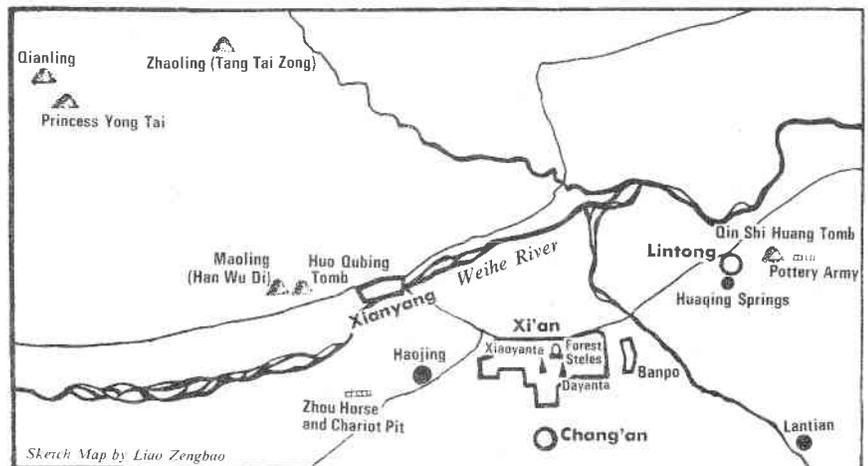
Later, with the emergence of civilization, Haojing 15 kilometers southwest of Xi'an became the best-known of several capitals of the Western Zhou dynasty. This was a slave society with a written language and a highly-developed bronze culture. On ritual vessels of this indestructible material it became the custom to make inscriptions, and today they yield much valuable historical information. An

important find discovered in Xi'an in 1976 was a *kuei* food container with the story of how the first Zhou emperor defeated the tyrannical king of the preceding Shang dynasty (15th to 11th century B.C.), also a bronze slave culture. Many Zhou bronzes have been found around Xi'an and to its west, where the Zhou originated. They are decorated with vigorous animal designs—the *kuei*, a legendary dragonlike animal which originated as a clan insignia, the *taotie*, a ferocious animal mask, the dragon-phoenix with wings and a long tail—and a design which may once have been an attempt to represent the roll of thunder.

The wealthy Zhou slaveowners had their horses, chariots and drivers buried alive with them for use in the next world, as did their Shang dynasty predecessors. One such Zhou horse and chariot burial pit has been excavated near Haojing.

Qin Dynasty Pottery Army

Worldwide attention was aroused by the 1974 discovery of a huge burial pit with thousands of life-size pottery warriors and horses. These were replicas of the troops with which Emperor Qin Shi Huang in the third century B.C. conquered the six other major feudal states and created a unified China. Expecting to be the first of a long dynastic line, he gave himself the title Shi Huang, founding emperor of the Qin dynasty, built numerous palaces at his capital Xianyang to the northwest and elsewhere around Xi'an, and constructed an elaborate underground tomb complex at Lintong to the northeast. He is also credited as the builder of the Great Wall, for he connected and strengthened the various sections built previously by separate states to keep out the Xiongnu nomads from the north. He unified weights and measures and the system of writing and instituted uniform coinage throughout his realm, as is testified by bronze measures, weights, coins and vessels bearing imperial edicts which have been unearthed.

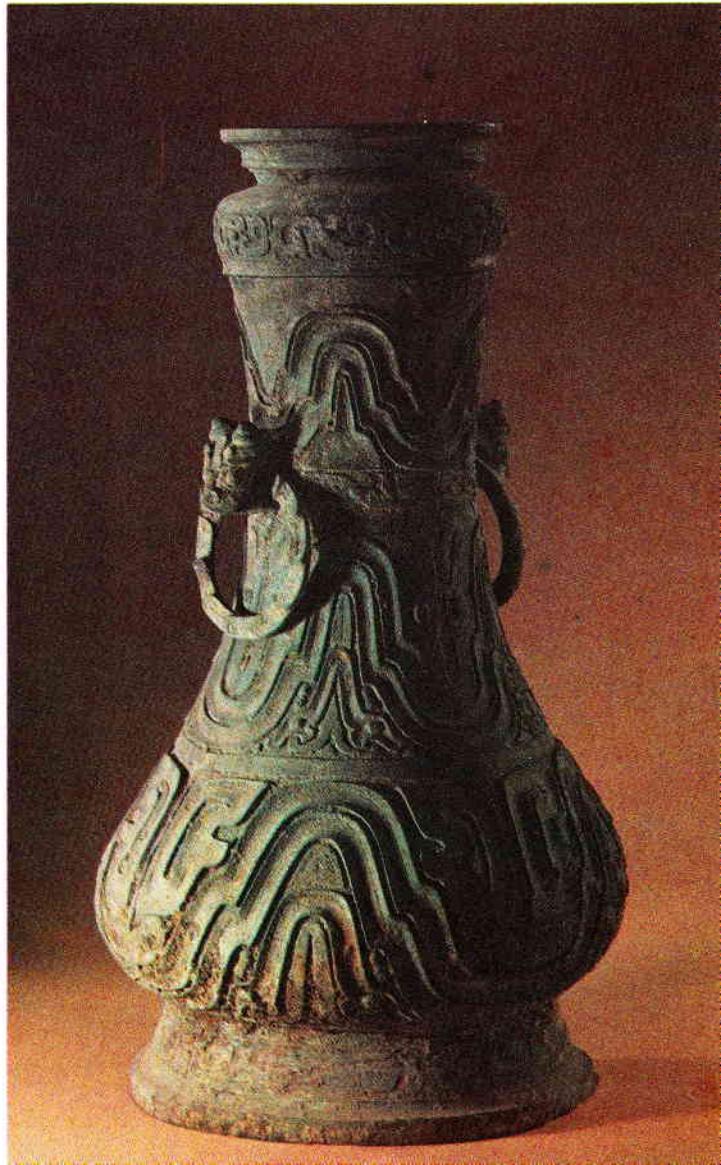


Sketch Map by Liao Zengbao



Some ruins of the Banpo Neolithic village,
with child burial urns in the foreground.
Wu Songlian

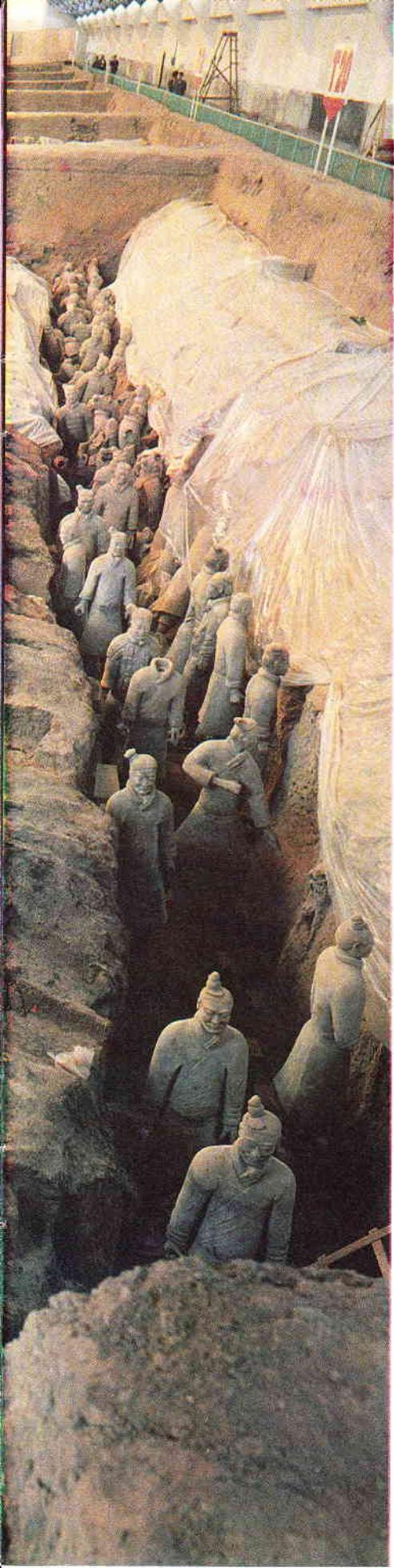
Ritual wine vessel, one of many Zhou
dynasty bronzes excavated around Xi'an.
Sun Shuming



Pottery basin with fish and human head
decoration from Banpo.
Xinhua







Archaeologists and local peasants cleaning the warriors. *An Keran*



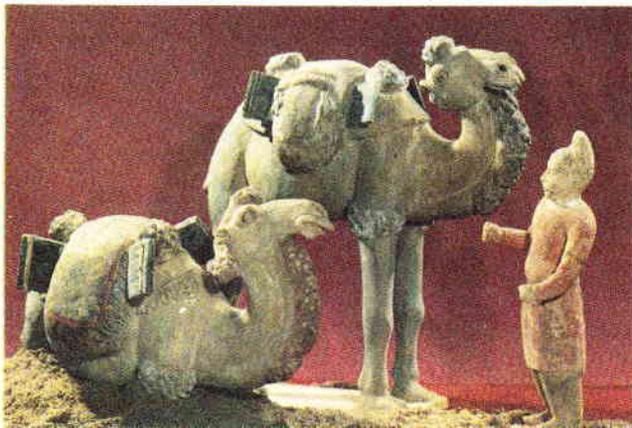
Pottery general. *Wu Songlian*

Army of 3,000 miniatures from a Han dynasty tomb. *Tan Manni*

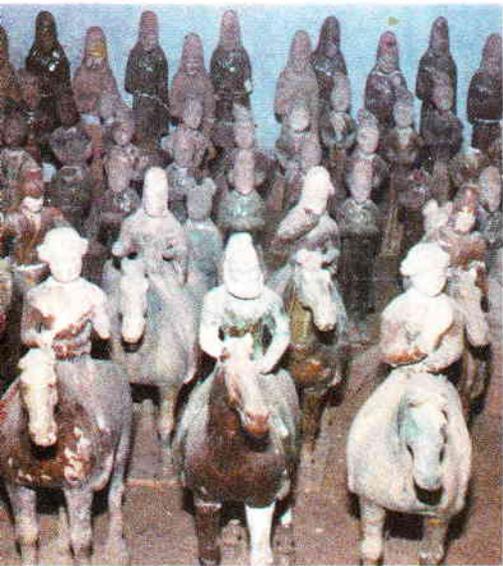


Han dynasty painted grave figurines. *Sun Shuming*

Excavation of Emperor Qin Shi Huang's pottery army. *Huang Taopeng*



Camels loaded with silk and their drivers in three-color glaze recreate the Old Silk Road scene. *Yang Limen*

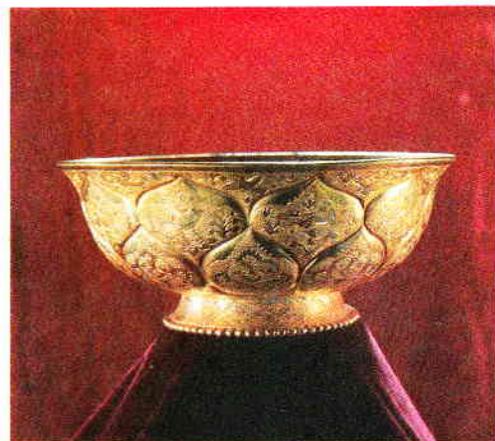


Visitors to the tomb of Prince Zhang Hui can see his tomb figurines in their original position.
Tan Manni



Tang reception for emissaries from abroad. (From copy of original mural on display in Prince Zhang Hui's tomb.)

Tan Manni



Exquisitely crafted gold bowl recalls the opulence of Tang dynasty Chang'an.

Massive sculptured lion guards Qianling, tomb of third Tang emperor Gao Zong and consort Wu Zetian, who later ruled in her own right.

Tan Manni

Three separate pits of pottery statues were eventually uncovered at Lintong, with a total of 6,000 infantrymen lined up in battle array in the first one, covering 14,000 square meters; over a thousand cavalrymen and some chariots in Pit No. 2 (6,000 sq. m.); and 73 armed warriors surrounding a commander seated in a chariot in Pit No. 3. Pit No. 1 has been roofed over as a museum so that visitors to Xi'an can see this magnificent pottery army in its original location. It calls up visions of the battlefield 2,000 years ago, with its vast numbers of infantrymen, tens of thousands of cavalrymen and thousands of chariots. When the pit was opened the floor was as littered with arrows as if there had been a battle there.

The finds show that under Qin Shi Huang, a man of great talent and bold vision, cavalry was replacing chariots and a shorter, lighter armor was coming into use. Among the weapons are crossbows with a trigger mechanism, rare at this early date, and bronze swords as hard as medium carbon steel which have resisted corrosion down through the centuries. Analysis shows they are an alloy of 13 different metals. The realistically sculpted warriors may have been modeled on real soldiers of Shi Huang's army. They represent many different characters and ages, and a total of 100 expressions have been tabulated. The sculptures are testimony to the sophisticated plastic art of the Qin dynasty, as well as to the high level and speed of pottery firing at that time.

Han Art: Massive, Stylized

The Western Han dynasty, which succeeded the Qin after a period of war between contenders for the throne, made Xi'an itself, then known as Chang'an, the capital of its far-flung multinational empire. The Han Chang'an off the northwest corner of today's Xi'an was one of the cultural high points of China's history. From the city caravans with silks began to move westward to Persia (now Iran) and then on to Western Asia. Thus

began the famous Old Silk Road. The might of the Han dynasty is reflected in its art, as exemplified by the sculptures at the tomb of the famous general Huo Qubing. Before he succumbed to illness at the age of 24, under the fifth Han emperor, Wu Di, he had defeated six intrusions by the Xiongnu, who were constantly threatening the trade route.

The Emperor Wu Di felt such sorrow at Huo's death that he ordered a tomb built for the young general near Maoling, the mausoleum he was then constructing for himself 40 km. northwest of Chang'an. The mound was made in the shape of the Qilian Mountains in the Gansu Corridor, which Huo had fought to protect. So far 20 of the sculptures that originally topped the mound have been found, all of animals. For the most part they retain the original shape of the stone, with only a few lines to indicate the features of the animal. The main piece depicts a magnificent horse with the figure of a defeated Xiongnu fighter underfoot. Another, a galloping steed boldly carved, seems to be ready to leap out of the rock and gives a sense of vigor and vitality.

The live burial of slaves in Western Zhou had given way to use of life-size figures in the Qin dynasty, which still later had shrunk to miniature representations for tomb use. A magnificent collection of 3,000 painted pottery warriors and horses was unearthed not long ago from a grave which may possibly be that of a Han dynasty minister of defense. The colorfully-painted stylized army — including some figures of minority persons — in the style of the period which stresses the essence but not detail, provides a glimpse of its splendid culture.

New High Point in Tang

Xi'an, as Chang'an, experienced another period of splendor during the 7th century Tang dynasty, which ruled the greatest and most flourishing empire in Chinese history after the Han. Chang'an and Constantinople, capital of the

Eastern Roman Empire and the western end of the Old Silk Road, became the two world centers for cultural and economic exchange.

Scenes from the life of the time can be seen in murals from Tang tombs, 2,000 of which have been excavated in the 30-some years of the new China: the magnificent palace at the north end of the city, dignified guards, gentle and graceful palace girls, as well as landscapes, which began to appear in Chinese art at that time. One painting in the tomb of Prince Zhang Huai depicts a game of polo; recently introduced from Persia. The mounted nobles with their mallets raised to strike are shown in high spirits.

Tang stone carvings are among the gems of Chinese art. The best of them are represented by the relief of six galloping steeds which carried the young General Li Shimin through many battles to unify the country. He had such feeling for his horses that when he became the first Tang emperor Tai-zong, he commissioned them to be immortalized in stone and placed before his tomb (Zhaoling). Four of the originals can now be seen in the Shaanxi Province Museum in Xi'an, along with replicas of two which were stolen and sold by a local official in 1914 and are now displayed in the museum of the University of Pennsylvania.*

Pottery with a three-color glaze made its appearance in Tang times, first mainly for funerary objects. Tang three-color glaze horses are famous in the history of China's ceramic art for their perfect design and realism — every flexed muscle is true to life. Other famous pieces show caravans of merchants from the west with camels loaded with silk, as often seen on the Old Silk Road. The female figurines reflect the health and beauty of the relatively free women of Tang times. There are also phoenix-headed ewers, vessels in the shape of an ox or elephant head, and various wine containers, pottery copies of Persian originals made in gold and

*A photograph of one of them appeared on p. 17 of the June 1981 China Reconstructs.

silver, reflecting the Persian influence on Tang art.

In 1087 the court decided to preserve the texts of the classics carved in stone. A century later they were housed in the Forest of Steles at Xi'an. At present it contains more than 1,000 inscribed tablets made from the Han times to the last imperial dynasty the Qing, which ended in 1911.

They consist mainly of Tang copies of the thirteen classics which every scholar had to master, including the *Book of Rites*, *Book of History*, *Book of Songs*, *Book of Changes*, the *Spring and Autumn Annals* and the *Analects of Confucius*, and *Mencius*, which was carved later. Totaling 600,000 words, they are carved on both sides of 124 stone tablets (people call them the heaviest collection of books in the world). There are also steles in the handwriting of the most famous calligraphers of the time including Yan Zhenqing, Liu Gongquan and Ouyang Xun. There is a preface to the Buddhist scriptures composed by the first Tang emperor and carved after characters in the handwriting of the famous early calligrapher Wang Xizhi (A.D. 321-379.) As some characters could not be found, an award of a thousand taels of gold was made for each.

Chang'an became a famous center for Buddhism. In 645 the monk Xuan Zang returned from an 18-year pilgrimage to India, bringing back a vastly more complete collection of Buddhist writings than had existed in China since Buddhism was introduced in the first century A.D. He persuaded Gao Zong, the third Tang emperor, to build Dayanta (Big Wild Goose Pagoda) to house them and after it was completed in 652 worked there compiling and translating the scriptures. Later Xiaoyanta (Little Wild Goose Pagoda) was built in 709, where another monk, Yi Jing, did similar work. From the top of these pagodas one gets a bird's-eye view of the modern city which has succeeded the ancient capital. □

An article on the city of Xi'an — ancient and modern — part of our cities series, will appear in a forthcoming issue. — Ed.

Folk Arts of the Oroqen

XU YIXI

THE vast forests of the Greater and Lesser Hinggan Mountains in China's northeast are home to over 3,000 people of the Oroqen nationality. In pre-liberation days they lived by hunting and gathering, and almost all their items of daily use were made from local materials — fur and hides, wood and bone, and birch bark. Though their lives have undergone great changes since then, their traditional arts and crafts have survived. Using the simplest materials, Oroqen folk artists make even the most utilitarian objects of daily use things of beauty.

Embroidery

In their cold mountain climate, Oroqen men and women alike wear the traditional outer wear of fur gowns and leather boots, gloves and hats. The men's robes have simple appliquéd borders in black, brown and yellow. The women's gowns are more colorful, with lavishly embroidered appliqué floral designs on the edgings, collars, cuffs and side slits. Boots and gloves are also decorated with floral appliqué.

Particular attention is paid to women's hats. Some have floral edgings in various designs, others feature buttons arranged in patterns and topped with tassels of

colored thread. The Oroqens once used local plant fibers for embroidery thread and tassels. Today silk thread in many colors is available.

Small items of daily use such as scent pouches, tobacco pouches, waist ornaments and small leather bags all feature delicate embroidered appliqué. When a young man and woman become engaged, the man traditionally sends his fiancée a horse, wild boar flesh and wine as betrothal gifts — symbolic of his role as hunter and provider. The woman demonstrates her skills in the gifts she makes for him — a robe with black fur trimming, a scent pouch and a tobacco pouch.

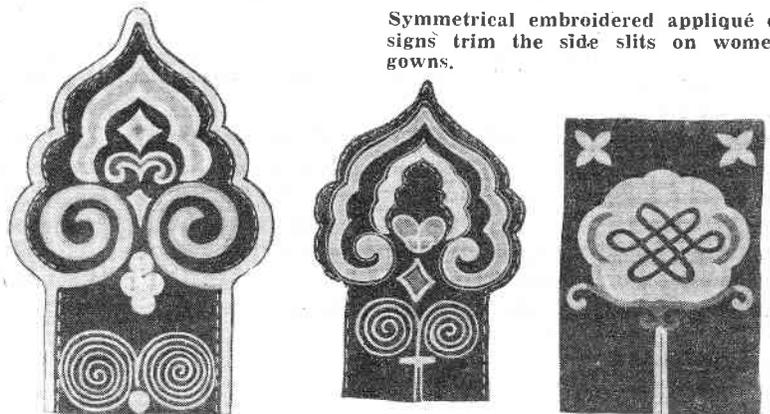
The pouches are frequently embroidered with *nanchuo* flowers — a favorite of the Oroqens, which looks like a blue diamond when it is in full bloom every July. Among the Oroqens unmarried women are likened to the most beautiful flowers, and bachelors are "lonely men." So the old saying, "When lonely men have *nanchuo* with them, they are no longer lonely," has a double meaning and the appearance of these flowers on betrothal gifts is particularly appropriate.

Incised Birchbark Work

In their old wide-ranging life of hunting and gathering, light and durable containers of birchbark were important for carrying and

XU YIXI is on the staff of the Nationalities Research Institute of the Chinese Academy of Social Sciences.

Symmetrical embroidered appliqué designs trim the side slits on women's gowns.



storing food and household possessions, and birchbark work is preserved as a traditional art. In early summers when the bark is flexible, the men choose straight, clean birch-tree trunks and make three cuts in the bark—two circular ones around the trunk and one down the middle. In this way they can peel off large sheets of bark which are then made into a variety of containers.

The women incise patterns on the soft, resilient birchbark by means of small mallets and chisels made of bone. The completed patterns are sometimes colored with red, yellow and black pigments, or else left in their natural color. A great variety of small round and oval decorated birchbark boxes are used to store sewing equipment, odds and ends and representations of gods and spirits. Larger clothes chests and water buckets are still sometimes made of bark. Vegetables, wild fruit and dried meat are stored in containers with wide bases and small mouths.

The "Adamalo" birchbark cases, round or in the shape of a flat cocoon, are an important part of a young woman's dowry and feature patterns with symbolic meanings. In the center of the lid is a large flower cluster interlaced with smaller flowers, signifying marital bliss and a permanent union. The edge of the lid and the body of the case are decorated with continuous repeating patterns symbolizing the woman's eternal loyalty to her husband. The floral designs are in three colors—red, for the woman's happiness; yellow, for the man's; and black, the background color. Because blue and white are

considered unfortunate colors, they are painted on a case only when a woman is widowed or some other misfortune befalls her. They are rarely seen today.

Designs from Nature

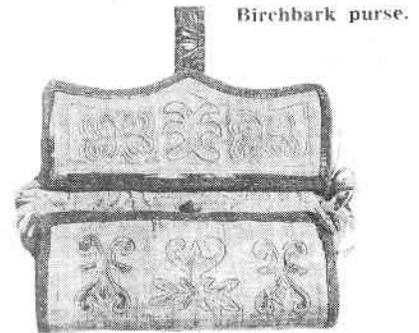
Oroqen folk art, whether in embroidery or incised birchbark, is characterized by symmetrical designs taken from nature. The most common motifs are flowers, birds, trees, clouds and waves. Striking, but less common, are designs of animals or human heads in which exaggeration and distortion are freely used. These designs express good luck, happiness and love. Overall, the artistry of the Oroqen is simple and robust, honest and direct.

Today the Oroqens are settled farmers, no longer dependent for their livelihood on the vagaries of the hunt. Many of the products they use in their daily lives—such as clothes made of woven cloth, metal tools and utensils—are the same manufactured products used in other parts of China.

But aspects of the old way of life are still preserved, such as fur and hide garments for winter hunting expeditions. Though no longer a necessity, birchbark household utensils are valued still for their artistry and tradition. The Oroqen people themselves and the personnel of state organizations concerned with minority nationality cultures are making efforts not only to develop folk art techniques but also to collect and organize the best samples of past and present works of art. □



An Oroqen woman in fur-lined hat and gown paints a design on a birchbark container. *Zhuang Xueben*



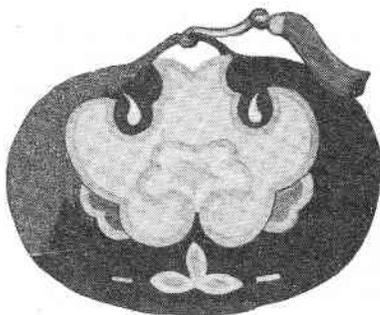
Birchbark purse.



Embroidered fur-lined gloves and pouch made by Oroqen women.

Zhuang Xueben

Scent pouch.



Geometric patterns in many colors decorate birchbark storage container.

Drawings by Yu Yixi

I See Tomorrow

SAM GINSBOURG

HOW are things at home?" I asked. "Terrific!" said Lu Mingming, a former woman student of mine. "You wouldn't recognize the place if you saw it again. Why don't you go down some day and take a look for yourself?" She was speaking of Aiguo village, located in Juxian county in southeastern Shandong, where I had worked for some months in 1971. As she spoke, mentioning people, places and events, little pictures of those days kept floating up into my mind.

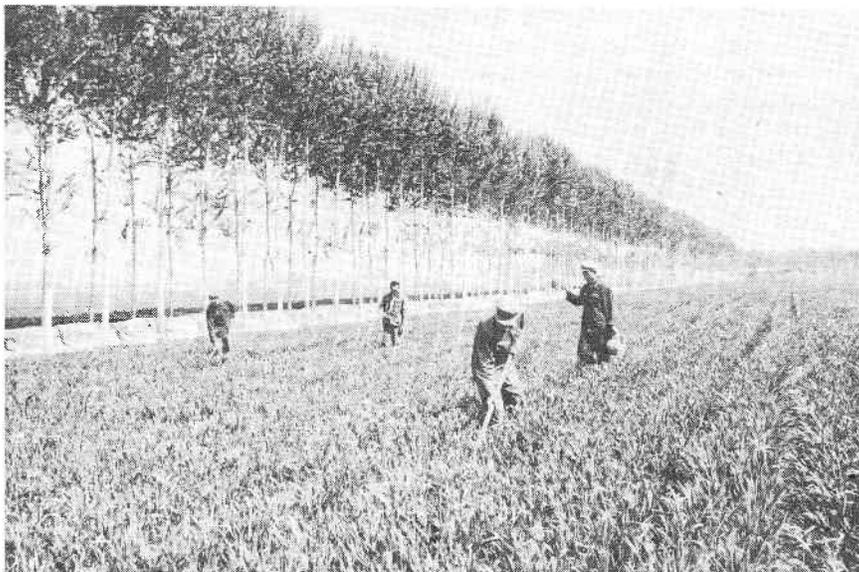
Aiguo Village

In April 1981, now, ten years later, I stood on a stone bridge, the gateway to Aiguo, at the end of the only street in the village worth the name. The other end of it stretched out to disappear around a curve a kilometer away, in an expanse of wheat fields.

The tall lean man with a cotton jacket thrown over his shoulders stands alongside me looking

*This article has been adapted by the author from the last chapter of his reminiscences *My First Sixty Years in China*, to be published in the near future by the New World Press, Beijing.

The 'responsibility system' has boosted village morale and agricultural production.



around with a thrifty master's eye. He is Lu Hongbin, Lu Mingming's father and a well-known national labor model, secretary of the local Party cell who has been leading Aiguo's peasants step by step along the road to socialism since the liberation of the entire country.

We stroll down the typical village Main Street, similar to dozens I have seen in all parts of the province. The street takes us past an almost unbroken freshly white-washed adobe wall punctuated by gabled gateways.

Lu guides me into one of them, the home of a man I used to know. The place looks familiar, except that two rooms have been added to the original three and a radio and a new sewing machine are in evidence in the central room. But what is this? In the corner of the courtyard is a brand-new hand pump. I try it out. It works easily. "There's one in every household now," explains Lu. I recall the numberless pails of water I had drawn from wells and carried on a pole every morning for the owners of the houses I lived in and some of the neighbors when I was here in 1971. What a boon



Professor Sam Ginsbourg, with Lu Hongbin (right), admires the brigade's flourishing orchard.

these pumps must be to the women here!

We walk on. A long two-story brick building attracts my attention. It's not often one sees two-story houses in the countryside. This one has eight self-contained flats, each with a little yard and a separate entrance. I knew the tenant of one of them. Ten years ago she was a girl who used to work here after graduating from a middle school in town. She comes out and greets me warmly. She tells me she has long since settled down in Aiguo, is married to a young brigade member, and has two children. She leads me into her home — a room downstairs and one upstairs — of which she is obviously proud. It is furnished simply but comfortably. There is a transistor radio on the table and some scientific literature on a home-made bookshelf. Both she and her husband are studying, she tells me.

The building, explains Lu Hongbin, has been built for newlyweds for whom there isn't enough room

SAM GINSBOURG was born in Siberia, in 1914. From 1926 to 1947, his home was Shanghai. Then he went to the Shandong Liberated Area and joined in revolutionary work there. Now a citizen of China, he is a professor in the Foreign Languages Department of Shandong University.

in their parents' houses. "You're certainly better off than some youths in the city," I remark. "We have any number of young people in our university who have had to postpone their plans to marry or have children for lack of housing."

Growth and Change

Lu suggests visiting the kindergarten. We enter the gate of a large compound. I stand there for a moment delighting in the noisy games of fifty or sixty little boys and girls, rosy-cheeked, well-dressed. They catch sight of me. The games stop. They line up and, led by their teacher, greet me with shouts of: "Granddad, how do you do!" They are sweet and entirely unselfconscious. The teacher, a girl of about 22, steps forward and introduces herself: the daughter of the owner of the house I stayed in ten years earlier. The kid I used to play with has grown into a very charming young girl, obviously a very capable and very authoritative person in the kindergarten. We exchange a few words. "Why don't you drop in and see my father?" — "I sure will." The children stand without crowding us or making impolite remarks. As I turn to leave they call, "Goodbye, Granddad!"

I recollect vaguely that the house of an old man, the Chairman of the Poor and Lower-Middle Peasants' Association whom I had come to like very much in 1971, is nearby. I decide to call on him. His wife opens for us. We recognize one another without difficulty.

The old woman is glad to see "Teacher" again, looking so well and no older than ten years ago. She tells me her husband is away visiting their son in another county. "He's retired now, you know?" The other children are away, too. Three are college students, she reports proudly.

She shows me the houses they have built recently — nine rooms in all, most of them intended for the children when they marry.

We go out into the cleanly swept courtyard. There's the hand pump again. In the corner of the

yard is the inevitable grindstone. I remember it well, remember the heavy exertion, the feeling of never arriving anywhere, as I pushed the great big stone round and round, helping to grind corn, sorghum, millet. Then I discover that the brick base of the grindstone has been converted into a coop for a flock of white Leghorns which scatter as I bend over to examine the coop.

No, the grindstone is not in use any more, the old woman explains. The grain is not distributed among the households these days: every brigade member has an account book for purchasing grain, the same as city dwellers. Whenever flour is needed all he or she has to do is to pay a grinding fee of one fen (cent) per catty and get the flour.

We are out in the street again. I ask Lu Hongbin about the retirement of the old Chairman. "A grand old man that has done more than his bit for the peasants in these parts," he says. He goes on to say that 28 old men and women in the brigade are now on pensions. There is no age requirement, anyone who is no longer fit for physical labor is entitled to a pension. The allocations come from the brigade's public welfare fund, which constitutes 3 percent of the brigade's total income, which last year was 430,000 yuan.

"That's a big thing in the village, you know," continued Lu. "From days immemorial sons had had to support their parents. That's caused half the family quarrels. The son was unwilling or unable to provide for the old folk; the oldsters weren't happy about the treatment they got; sons tried to shift the burden on to each other's shoulders. Now that the brigade takes care of the old people, there's more courtesy, less squabbling and wrangling, less bad language. Elders are shown respect. The main thing is the material base." Lu smiled happily; he was pleased with how well the big question had been solved.

One Family

Scenes I witnessed during the day along Aiguō's main street kept

me awake that night in the guest house. The street, though I had seen only the externals, was, I felt, the key to the character and life of the village. I wondered what lay under the surface.

Lu, when asked the following morning, offered to tell me in detail about the new Party policies being implemented in the village, but advised me first to talk with some of the brigade members or cadres. He recommended visiting the owner of the house I had stayed in ten years back. That evening I dropped in on the family.

The old man, now the production brigade storekeeper, his wife, one of their two sons, two of the five daughters, some children (the old man had ten grandchildren, most of them living in other villages) filled the room. They had been warned of my coming and had turned out in force to welcome "Teacher."

I didn't crowd them with questions: they knew what I wanted — a general idea of their life and work today.

The old man gave the background story, the others filled in the details.

I listened to the unhurried speech, occasionally taking notes of salient facts. They were:

Two sons — both working, at salaries of around 45 yuan a month each.

Three of the five daughters married. Nothing was said about their economic status: their income was their husbands' concern.

Ten children among them, four attending school right in the village, another five in the kindergarten, one still breast-fed. "You must have seen some of the kids in the kindergarten this morning," added the fourth daughter.

Three senior middle-school graduates in the family.

The previous year the old storekeeper and his two unmarried daughters had received in all 470 yuan in cash and about 250 kilograms of grain (wheat and coarse food grain) each.

The wife had got more than 450 yuan for two pigs she herself had

raised and recently sold to the brigade, as well as some hens. Two new sewing machines, two new bicycles added during the past few years; new houses erected for the ever-increasing family.

Back in my room after the visit I reckoned up all this and some other things, such as savings in the bank, spare grain in the brigade storehouse, free schooling and medical service — it amounted to a happy and secure life free from anxiety and fear, if not wealthy yet.

Responsibility System

"Will you give me a rough idea of what the new farm work system is all about?" I asked Lu when I saw him next. "Well, in the past brigade members had no material interest in the quality and quantity of their work. Whether they actually worked or not, whether they worked conscientiously or in a slapdash way, so long as they turned out for the job they would get their work-points: usually ten points for an adult man, eight for a woman, six for an oldster. The sole measure was the amount of time spent in the field."

The new way, known as the "job responsibility system" is directed at making every peasant materially interested in the economic results of everything he or she does. They receive remuneration on the basis of the quality and quantity of work performed. If they overfulfill the quota, they get a share of the value of extra output as a premium; if they do not attain it, they have to make good a part of the deficit. This spurs them to work intensively and effectively, to think of ways and means of keeping down costs, improving the quality and increasing the output.

"If you want to see how it works out in practice, let's take a walk to the tree nursery and orchard." We made our way along a path in the midst of a lush wheat field which Lu predicted would yield no less than 800 catties per *mu* (1/15 of a hectare) this year.

At one spot he stopped and asked with a smile: "Isn't this where your Fourth Production Team used to gather in the mornings back in



The brigade's new two-story housing for young married couples.

1971, waiting for everybody to assemble, then waiting for the team leader to appear and assign the day's work?" It really was the place. "Waiting at street corners, waiting at field borders, making no move till the team leader orders," he rattled off the old routine. "Well, there's no more of this now. Everyone now knows what his or her job and responsibility are. No need to wait around. Besides, time is too precious."

We reached the tree nursery and the orchard. Two young fellows were busy pruning apple trees.

The nursery and the orchard occupy 60 *mu* of land. This spring the brigade entered into a contract with a group of brigade members to take care of the seedlings and fruit trees. The contract fixed the net profit to be handed over to the brigade at 1,500 yuan. This figure was based on the average income from the nursery and the orchard over a period of years. If the group worked hard, used their heads to improve organization and management, applied scientific methods, they could overfulfill the quota. The group had now cut down the number of its members from 11 to 6, but the work was well taken care of. Though the results for 1981 could only be estimated as yet, the group hoped to surpass the quantity and quality quotas, in which case they'd get a fair share of the surplus as a premium.

"That's how it works," said Lu. Everything is linked up with production quotas and results, and

with concrete individuals or groups of people. It's this way in farmwork and in sideline occupations, with rank-and-file brigade members and with cadres. Of course, there's a big diversity of ways the system is being put into effect for different kinds of work, in different places, in different conditions. New forms are being created all the time. That's one of the system's merits — it's flexible. But the general idea and principles are the same . . . You see now?"

Yes, I saw it now, and I liked what I saw.

I asked Lu Hongbin what general idea and principles he was talking about. He said simply: "Socialism."

What Did I Learn?

I am to leave Aiguo tomorrow morning. Tonight I'm putting my notes in order and thinking over what I'm going to tell my friends back home.

I'm a little worried: will I be able to give them a true picture of all the exciting things I've seen and heard,

I know that there will be all kinds of questions, some of them posers. I want to be sure I can answer them truthfully and convincingly.

One of the questions I anticipate is: are there many households or districts where output quotas are fixed for individual households (with the implication that the present policy in the countryside is leading some of the peasants away from collectivism and socialism)?

No trouble about answering this question: there are about 5 percent of such households in the whole of Juxian county, and none in Aiguo. They are mostly poor, remote households in mountainous areas, not suitable for collective production. The main problem here with regard to such families is to ensure that these peasants can eat their fill and dress warmly. No pressure is being brought to bear on such peasants to accept the "job responsibility system," they may do what they consider suitable in their particular conditions. But they are not permitted to violate the basic socialist principles — that is, land is collectively owned and cannot be bought or sold by or to individuals.

Another question: is there any disagreement in the countryside with the new policy? No, not on the part of the peasants and most cadres, so far as I could tell. One peasant told me: "The only thing we fear is change, fear that the policy will change. If the policy remains stable, we'll be well-off." If there's any disagreement, it's on the part of the village cadres. Some do not understand yet what the new policy is about; others are prompted by egotistical motives. There are also those who work in the cities, but whose families have remained in the countryside and who are short of manpower. The three categories, added together, constitute but a minority of the cadres on county, commune and production brigade levels. They are, I was told, gradually changing their views and attitudes.

What about plots for personal use — do the peasants still have them under the new system? So far as Aiguo is concerned, the brigade members still have as much land for personal use as they used to — 7 percent of the total area under cultivation. This has already been planted, and it would be inconvenient to make any changes at present. After the autumn harvest the area for private use is to be increased to 15 percent, as stipulated by the Party Central Committee. But, the brigade members here expend less time and effort than before cul-

tivating the private plots, because it's more worth their while to pitch into fulfilling and overfulfilling the contracts with the brigade.

Another question: is Aiguo a typical place by which to judge the situation in the countryside and the merits of the current agricultural policies? Yes, in a way it is typical, having a population of 320, of which 350 people are engaged in agricultural production, and 1,200 *mu* of land, which is pretty usual for a production brigade in the northern part of China. And also, not entirely typical as in a vast country such as China with its immense diversity of conditions it is impossible to find a completely typical place.

But of one thing I'm positive: the road that Aiguo has taken is typical for the whole country because, as Lu Hongbin has put it very succinctly: "It's the best way we've found of getting to socialism."

Six Advantages

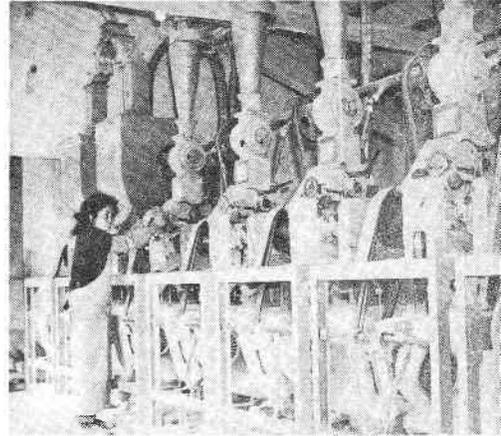
Finally, what, after all, are the advantages of "job responsibility system" in farmwork? That's a big question. I would say the main advantages are six in all:

One — the contracts are entered into in spring; the premiums for overfulfillment and penalties for non-fulfillment are determined in autumn; everyone knows clearly what his or her job is, and the brigade cadres don't need to wear out their tongues, their shoes and their patience rounding up people to go down to work and making clear what each has to do.

Two — the area of land under crop cultivation has increased: bits of land on the edges of fields and roads and where chickens used to be raised are being fully used; wasteland is being reclaimed; intercropping is widely applied.

Three — collective income has increased considerably. Aiguo's total income in 1980 amounted to 430,000 yuan, of which 3 percent was allotted for public welfare needs; labor insurance, free medical service, education, etc. — leaving 70,000 yuan for production in 1981.

Four — private income has gone up. Ninety percent of the brigade members have personal savings accounts, totaling 100,000 yuan in 1980 for the whole brigade. Almost every young brigade member has a wristwatch, and more than ten brigade cadres all own watches. There are three or four bicycles in every household. People are well-dressed.



Villagers no longer have to spend hours grinding their own grain — the collective grain mill now provides flour for the whole commune.

Photos by Wang Hongxun

Five — the bachelors have all managed to find wives for themselves.

Six — At the end of April 1981,* every brigade member had on the average 200 catties of grain, with surplus grain in the brigade storehouse. No one this year has stolen firewood or vegetables.

These, in brief, are the main advantages of the new system here. There are others, too numerous to list one by one.

I admit willingly that I'm an enthusiast. I don't look upon this trait of mine as a shortcoming, so long as my enthusiasm does not make me lose my perspective.

So when Lu Mingming asked me on my return how I had found things in her native place, I said what I felt certain was the truth: "Terrific!" □

* In the old days, the period between April and the harvest of the wheat crop (in July in most parts of China) was the most difficult time in the year for the peasants, as the grain produced in the previous year was all or nearly consumed by that time.



Boston Museum Paintings in China

SHAO DAZHEN

THE Boston Museum of Fine Arts was the first museum to bring a showing of American painters to China. The 70 representative works which were exhibited in Beijing and Shanghai were well appreciated by Chinese viewers.

One thing the show revealed to them (it included paintings from before the American revolution to the present) was that artists in the U.S. reacted sensitively to cultural trends in other lands. This may be one reason why artistic styles in the United States are so diverse and have changed so rapidly. The exhibition included classical portraits, landscapes in the romantic vein, paintings of events of everyday life full of originality and folk feeling, and also works representing impressionism, realism and neorealism. A few are abstract, or blend realism and abstraction.

Through such paintings as Thomas Cole's *Sunset in the Catskills* viewers saw painting in the U.S. beginning to assert its independence from the European tradition with the Hudson River school of the first half of the 19th century, and in *Elms in Summer* — which was particularly well liked — how George Inness, influenced by the French Barbizon

school, pushed landscape painting in the U.S. to a more mature stage.

Viewers could share the emotion of Winslow Homer's *The Look-out — All's Well* and were inspired by the strong figure of the old seaman calling the watch.

Other aspects which attracted particular attention were the delicacy and sweetness of Mary Cassatt's *Margot Embracing Her Mother*; and the free use of color in composition in James McNeill Whistler's *Symphony in Red* and the careful modeling of figures and rich coloring in the works of John Singer Sargent.

Other paintings that found favor included some of The Eight—eight artists who revolted against the art establishment and the tendency to glorify European painting. Though they experimented with new techniques, they refused to go along with some Europeans who insisted on the primacy of formal technique over subject matter. Instead, these Americans drew inspiration from contemporary life in the United States — to the extent that some critics disparaged them as the ashcan school. Paintings in this genre included *Tucker-ed Out — The Shoeshine Boy* by John George Brown, who was in some ways a predecessor of The Eight, and two by members of the

group itself, John Sloan's *Flowers in Spring* and George Benjamin Luks's *King's Chapel, Boston*.

THE exhibition was valuable for Chinese painters in helping them to see how art in the United States sought an independent road both in subject matter and means of expression. This enabled much American painting to embody a worldly outlook and be firmly rooted in everyday life, making religious or mythical subjects rare. It also enabled treatments to reveal or celebrate a subject rather than "preach" metaphysical ideas. Viewers seemed to feel close to and at home with works of some of the painters who showed this genuine national spirit, such as Homer, Inness, Edward Hopper and Rockwell Kent.

This is likewise true of works that went beyond photographic realism and sought to bring out the essence of the subject through a freebrush style, as has been a traditional feature of Oriental art, such as Maurice Prendergast's *Lady with a Red Sash*, Horace Pippin's *Night Call*, Marsden Hartley's *Black Duck*, Milton Avery's *The Artist's Daughter in a Blue Gown*, and the works of John Sloan and George Luks.

I was happy to see the inclusion of the forest scene *Gould's Hill* by Neil G. Welliver, whose works achieve a blending of realism with the abstract. I believe that total naturalism should be avoided, as should formalism, and that the universal law of creativeness in art lies somewhere between likeness and unlikeness. The strength and attractiveness of some of the paintings in the exhibition lies in the fact that they are a unified combination of subjectivism and objectivism, of realism and expression of the essence.

We are grateful to the staff of the Boston Museum who organized this exhibition. Their hard work has contributed greatly to the interflow of culture between the United States and China and the promotion of friendship between the two countries. □

SHAO DAZHEN is an art critic working with the magazine *World Art*.



Justice overcomes evil.

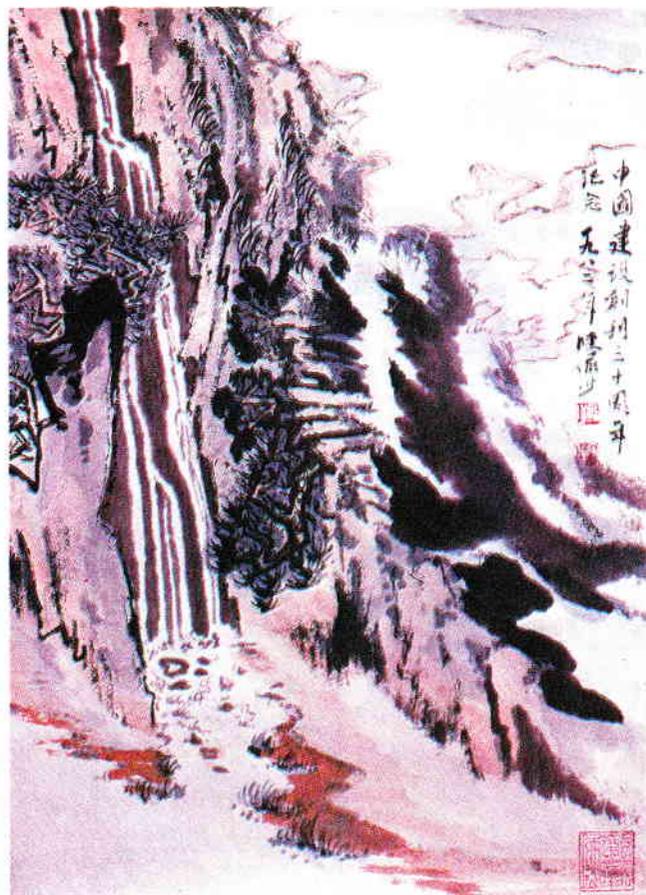
Fan Zeng

From Noted Artists on the 30th Birthday of China Reconstructs



Chinese hibiscus

Xiao Shufang



Waterfall

Lu Yanshao



Evergreen

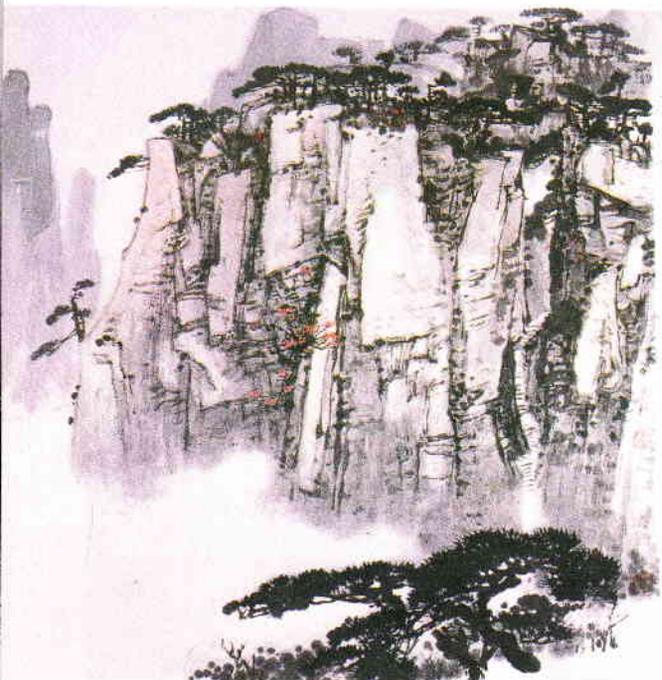
He Haixia



Pines flourish on the mountains.

Dong Shouping

From Noted Artists on the 30th Birthday of China Reconstructs



Huangshan mountains

Liang Shunian



Waiting for the fruits of his labor.

Zhou Sicong

China's Forests—Past and Present

WEN HUANRAN and HE YEHEG

IN ancient times China was a well-forested land, even in the now-arid northwest and the cold Qinghai-Tibetan Plateau. Over 7,000 years of environmental changes and human activities, however, gradually stripped the country until at the time of liberation in 1949 only a small percentage of its forests were left. Thus, in common with many countries today, the protection and increase of forest reserves is a serious problem.

Today, China stands eighth in the world in terms of forest area—but only because of its vast size. Actually its forest cover is only 12.7 percent, far below the average for the world and for Asia. Moreover, forest distribution is unbalanced. The main forests lie in northeast China, northeast Inner Mongolia and the frontier areas of the south. Forest cover in north and northwest China is less than 1 percent.

Ancient Forests

Even 3,000 years ago there were still many forests in north China. Until the middle of the Qing dynasty (1644-1911), in many parts of the Yanshan and Taihang mountains “the dense forests prevented the passage of men and horses.” Before the 18th century, the Greater and Lesser Hinggan ranges and the Changbai Mountains were known as places where “trees reached to the sky” and “the sun could not be seen even at noon.” Even today northeast China and northeast Inner Mongolia are China's largest sources of timber. The Loess Plateau in the northwest has one of China's smallest forested areas. In the dis-

tant past it was a place of beautiful green mountains and blue waters, totally different from the denuded mountain scenes of today.

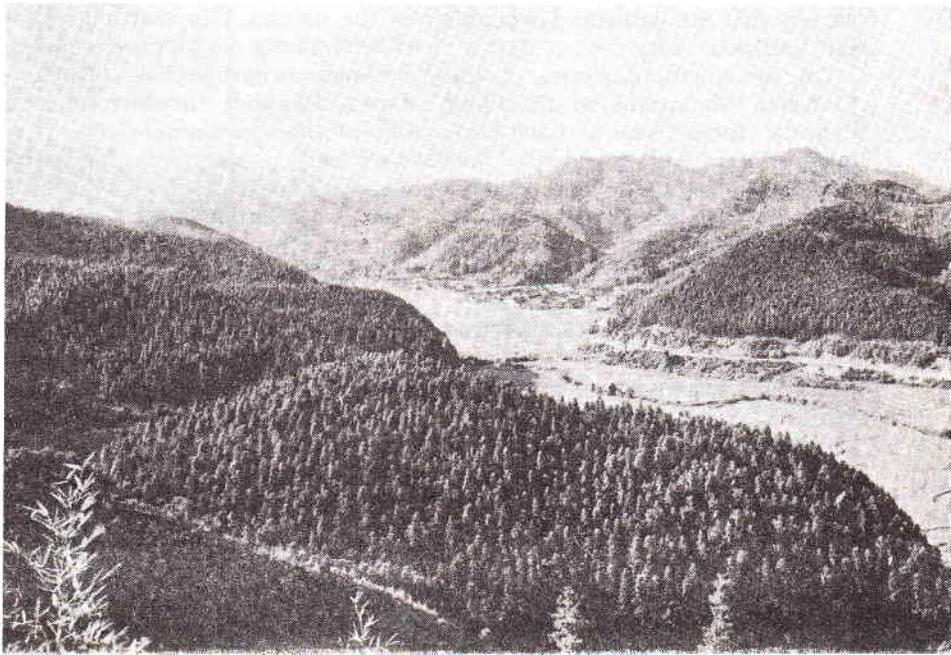
Why were there so many forests in the Loess Plateau in ancient times? For one thing, natural conditions were favorable in its southeastern part, the climate humid and the rainfall plentiful. The northwest was dry, with light rainfall, but its topography held what rain did fall, and this was sufficient to maintain the forest cover. Its high altitude, low temperature and relatively high humidity also favored the growth of forests. The fine-grained porous soil facilitated the penetration and preservation of water. The loess contains calcium carbonate, which helps the accumulation of humus and improves the soil.

In addition, the Loess Plateau was sparsely populated in ancient times, at least until people were moved there during the reigns of Shi Huang (221-210 B.C.) of the Qin dynasty and Wu Di (140-87 B.C.) of the Han dynasty. This preserved the natural vegetation and the plateau's “green mountains and blue waters.”

The subtropical zone between the Qinling Range and the mountains of northern Guangdong province and the Guangxi Zhuang Autonomous Region stretching over southeastern Tibet is one of China's largest areas of natural forest. Judging from samples of ancient wood under the Changjiang (Yangtze) River dug out at Anqing, Anhui province; the wooden coffins of the Mawangdui Han dynasty tomb unearthed in Hunan province; leaves unearthed from a site in Zhejiang province; and the spore-pollen analysis of sediment in Dianchi Lake in Yunnan province, this area has kept its subtropical features for over 7,000 years. Here the trees, including bamboo, are always green.

China's subtropical zone stretches from Taiwan through Fuzhou, central and southern Guangdong and Guangxi, Hainan and other islands in the South China Sea, southern Yunnan and Tibet to the southern slopes of the Himalayas (up to 900-1,000 meters above sea level). In the past there were many varieties of rare trees, including valuable timber trees. Today there are also fruit trees such as the

Tree farms such as this one in southeast coastal Fujian province are part of the nationwide effort to increase the country's forest coverage.



WEN HUANRAN is an assistant professor doing research at the Geography Institute under the Chinese Academy of Sciences.

HE YEHEG is a lecturer in the geography department at Hunan Teachers' College.



Scientists at Heilongjiang's Research Institute of Forestry Science work to develop improved varieties of the Korean pine.

coconut, litchi and longan. In these areas the trees are tall and the forests dense, with many vines and parasitic plants. Mangrove forests are scattered along the coast.

Grasslands and deserts cover China's west. Here also there were many forests in the past. A century ago poplar forests around the Tarim Basin were greater than today. Along the Yuhe River (now the Yarkant River in the western part of Tarim Basin) poplars "lined the roads for several hundred kilometers" and the local people spoke of the "sea of trees." These were the *Poplar diversifolia*, a variety that can withstand drought, salt and poor soil.

On the northern slopes of the Tianshan Mountains in the Qing dynasty there was a 1,500-kilometer forest belt so dense that even a single horse rider couldn't enter it. The Ili River valley in western Xinjiang is a grain area and famous for its melons and other fruit. Its apples, walnuts, and apricots are valuable in this remote desert region.

China's territory stretches from 4°N to 53°N and from 130°E to 73°E. The variety of trees, therefore, differs greatly. Pines, for example: Korean pines in the Lesser Hinggan Range and Changbai Moun-

tains, Japanese red pines in eastern Liaoning and Shangdong provinces, Chinese pines in north China, masson pines and Huangshan pines in central China, Yunnan pines and Himalaya pines in the south and southwest. Even on the same mountain, such as in southwestern Yunnan, the climate from the foot to the top ranges from subtropical (or tropical) to sub-frigid. This geographical condition also increases the diversity and abundance of China's forests.

During the Ice Age, China was only slightly affected and some world-famous plants survived, such as the ginkgo, *Glyptostrobus pensilis*, *Metasequoia glyptostroboides*, *Cathaya argyrophylla*, *Liriodendron*, *Davidia involucrata* and *Camptotheca acuminata*. The "living fossil", metasequoia, for example, was once distributed over large areas of Europe, Asia and the Americas from the Cretaceous to the Tertiary periods. Destroyed by glaciers, its natural distribution in China is today limited to Sichuan's Shizhu county, Hubei's Lichuan county and Hunan's Longshan county. Through transplantation for many years, it now grows in some fifty countries, its distribution wider today than it was before the Ice Age.

Before 1949, the distribution of forest in China had greatly changed from ancient times. Climatic changes were part of the cause. Changes in the Tarim Basin, for example, were the result of alterations in the Tarim River system and the movement of the Taklimakan sand dunes caused by prevailing winds. Coconut trees in Guangdong and Guangxi were affected by the great cold waves after 1050 and especially in 1450.

Changes in China's forest distribution were also caused by fires and insects. In addition, forests were destroyed by reactionary rulers, wars, imperialist plunder, indiscriminate felling and fires caused by man. Generally speaking, however, the most serious problem is the destruction of forests to create farmland. To protect forests and develop more of them, the people's government issued the "Forest Law" in February 1979. The government has strengthened the leadership at various levels and scientific research institutes, provided a plan for forestry development, and speeded up the construction of shelterbelt systems. China's forestry is developing steadily. □

Tree nursery in the arid western regions — Yarkant county, Xinjiang.

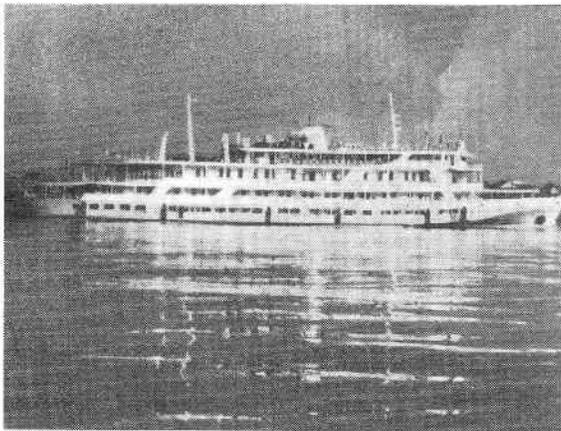
Photos by Xinhua





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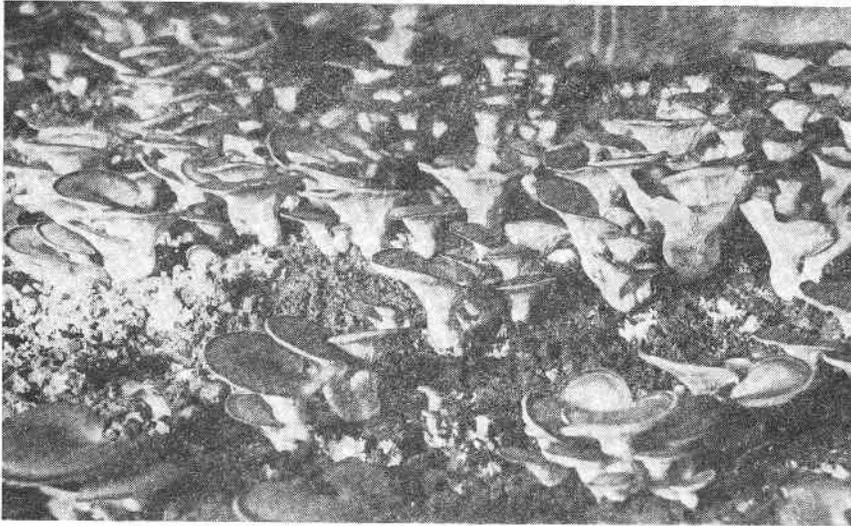
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Mushrooms cultivated indoors are good for experiments, but do not grow as well as those cultivated outdoors.

leaves are clusters of golden mushrooms. The leaves shade them from the sunshine and help maintain proper humidity. But they also complement one another in a less obvious way.

Unlike more biologically complex plants, mushrooms have no chlorophyll and cannot produce oxygen through photosynthesis. Bean plants, of course, can. So the mushrooms absorb the oxygen

The Mushroom Man

WANG MINGZHEN and LI YANLING

FUGEZHUANG is a small village 40 km. southeast of Beijing, but the postman is much busier than one would expect. Since 1980 over 2,200 letters from around the country have arrived, all of them addressed to one man: 46-year-old Jin Liancheng, a peasant who through his own efforts has become something of an expert on the cultivation of mushrooms and other edible fungi.

Edible fungi of all kinds are a food delicacy in many parts of the world, but growing them on a commercial basis is a tricky business requiring a lot of technical knowledge and careful attention to detail. Jin has not only succeeded in mastering the elements of cultivation, but has also added some innovations of his own. And, instead of using this knowledge to enrich his own family, he has concentrated on research, making himself a kind of nationwide consultant for anyone seeking his help.

WANG MINGZHEN is with the agricultural department of the Beijing Municipal People's Government. LI YANLING is a reporter for Radio Peking.

A small room on the west side of Jin's home is his indoor laboratory. On wooden shelves are thousands of bottles of culture (fungi spores in nutrient materials from which mature plants can be grown) all neatly labeled with the names of the different varieties Jin works with: straw and oyster mushrooms, hedgehog hydnum, and so on. Also in this room are the inoculation chambers — bacteria-free boxes which Jin has made himself and in which pure strains are cultured by carefully injecting bactericides into fungi that are contaminated.

The floor space is crowded with brown-glass jars, from the mouths of which sprout clusters of mushrooms about 35 cm. long. According to Jin, each cluster weighs about 800 grams — a far cry from wild mushrooms, whose clusters may reach 3 kg. in weight. Jin strongly recommends outdoor cultivation, which, he says, results in quick growth and bigger bodies, with clusters weighing up to 1.5 kg.

At first sight the courtyard of his house seems devoted to nothing but kidney bean plants. But underneath the dense cover of



Rubber gloves attached to Jin Liancheng's sterile inoculation boxes allow him to work inside the boxes without contaminating the fungi contents.

given off by the bean plants, which in turn absorb the carbon dioxide given off by the mushrooms. Combining mushroom cultivation with that of other plants not only makes efficient use of available space, but enhances the growth of both kinds of plants.

Jin has also found other ways to accelerate growth. He has developed a way of raising *Pleurotus ostreatus* (oyster mushrooms) so that they mature in 15 days instead of the 45 days usually required. He estimates that by applying his methods just in his 150-square-meter courtyard he could bring in an income of 6,000 yuan in only six months — an enormous sum in terms of Chinese peasant income. But Jin has chosen another course.

Sharing His Knowledge

The "mushroom" man's achievements have been reported in

newspapers and on the radio, and he now receives as many as 60 letters a day from people seeking advice or asking for some of his cultures. A number of people come to see him in person. Because he still works full time as a member of his brigade, he can handle these queries only in his spare time. He writes letters late into the night and frequently visits libraries or research institutes to answer questions. He has given up cultivating mushrooms himself so he can devote more time to research, answering people's questions, and improving the quality of the cultures he supplies to mushroom-growers all over the country (in the process, he has also lowered the cost of a bottle of culture by over 60 percent). He has published several pamphlets outlining his methods, and these too are distributed widely.

Jin is an enthusiastic promoter of mushroom production, both as a way for peasants to earn money and because of their nutritional value. As he points out, 100 grams of dried mushrooms contain 12.5 g. of protein, 60 g. of sugar, 6.4 g. of fat, various kinds of vitamins, enzymes, and seven of the eight varieties of amino acid needed by the human body. He believes mushrooms can reduce cholesterol in the blood and that they have anti-cancer properties as well.

An acquaintance once asked Jin why he persisted in sharing his knowledge so freely. The smart thing to do, this self-appointed advisor went on, would be to keep the knowledge to yourself and use it to get rich. But Jin only shook his head: "If my own family got rich, it would mean nothing. Only when all of China's 800 million peasants achieve prosperity will we have a truly well-off society."

Family Life and Study

Jin was orphaned at an early age, and went to work in a scientific apparatus factory after graduating from middle school 27 years ago. But then he contracted tuberculosis. Kang Xiuying, a woman worker at the factory, sympathized with his difficulties

and helped him conduct some independent research on the effectiveness of certain drugs on TB bacteria. With timely medical care, he recovered, and soon Jin and Kang became husband and wife. In 1962, in response to the Party and state's call to build up the socialist countryside, they took their baby son and moved to Fugezhuang village to work as peasants.

Today Jin calls Kang his chief assistant, and brags that she is quicker and more accurate than he is in certain delicate operations that require great dexterity. "Seventy percent of my accomplishments," he goes on, "are due to her efforts." Kang herself laughingly replies that this is flattering but untrue: "I just help out as he directs."

Jin also gives great credit to a man he calls his teacher, Lu Donglai, a technician at the Institute of Microbiology under the Chinese Academy of Sciences. In 1973, when Jin began to cultivate edible fungi, Lu gave him a guided tour of the Institute's laboratories and workrooms, and also provided him with fungus cultures and reference materials.

Lu took a great interest in this peasant who was so enthusiastic about doing scientific research, and then and later he patiently answer-

ed all of Jin's questions on complicated technical processes. Lu was particularly helpful in teaching the proper procedures for eliminating contaminated fungi from cultures, a key process in cultivation.

Jin always brought his research results to Lu so that they could sum them up together, and it was Lu who finally persuaded him to write his pamphlets, though Jin had at first protested that his educational level was too low.

Even during the chaotic years of the "cultural revolution," Jin did not stop his research. Then and now, he haunts second-hand bookstores for works dealing with his specialty and has accumulated a library of some 50 volumes. He has also read articles translated from Japanese, English, German and other languages. Extensive study has improved his grasp of the theoretical side of his work, and practice has perfected his techniques.

Jin's latest enthusiasms are certain edible fungi that can be grown in waste materials such as ashes or manure. His research in this area will undoubtedly yield interesting results. And those results will inevitably end up in the hands of farm workers all over China, to the great benefit of the country and the people. □

Jin and wife Kang Xiuying with their stock of mushroom and fungi cultures.

Photos by Zhang Jingde



Legends and Tales from History:

Jiang Taigong — He Fished and Waited

WEI TANG



THE STORY of Jiang Taigong has been used on many levels in China. At its simplest it may be said to be an example of patience, or the philosophy that if you wait long enough things will come your way. A more sophisticated message applicable in military and political strategy is: Wait until circumstances ripen.

He is a real historical character named Jiang Shang (also known as Jiang Ziya) who in the 11th century B.C.) became advisor to King Wen and his son King Wu, founder of the Zhou dynasty (1122-771 B.C.).

THE last ruler of the Shang dynasty (16th-11th century B.C.) was a tyrannical and debauched slaveowner who spent his days carousing with his favorite concubine Daji and mercilessly executing or punishing upright officials and all others who objected. Jiang Shang had once served the Shang king and had come to hate him with all his heart. He was an expert in military affairs and hoped that some day someone would call on him to help overthrow the king. He waited and waited till he was 80 years old, continuing placidly with his fishing in a tributary of the Weihe River (near today's Xi'an in Shaanxi province). Some versions of the story have him using a barbless hook or even no hook at all, on the theory that the fish would come to him of their

own volition when they were ready.

ACCORDING to the story, King Wen of Zhou state, which had risen in central Shaanxi, came along and found Jiang Shang fishing. King Wen, following the advice of his father and grandfather before him, was in search of talented people. In fact, he had been told by his grandfather, the Grand Duke of Zhou, that one day a sage would appear to help rule the Zhou state. When King Wen saw Jiang Shang, he felt at first sight that this was an unusual old man, and began to converse with him. He discovered that this white-haired fisherman was actually an astute political thinker and military strategist. This, he felt, must be the man his grandfather was waiting for. He took Jiang Shang in his coach to the court and appointed him Prime Minister and gave him the title Jiang Taigongwang (Hope of the Duke of Zhou). This was later shortened to Jiang Taigong.

An account of Jiang Taigong's life written long after his time says he held that a country could become powerful only when the people prospered. If the officials enriched themselves while the people remained poor, the ruler would not last long. The major principle in ruling a country should be to love the people; and to love the people meant to reduce taxes and corvee labor. By following these ideas, King Wen is said to have made the Zhou state prosper very rapidly.

AFTER King Wen died, his son King Wu, who inherited the throne, decided to send troops to overthrow the King of Shang. But Jiang Taigong stopped him, saying, "While I was fishing at Panxi, I realized one truth: If you want to succeed you need to be patient. We must wait for the appropriate

opportunity to eliminate the King of Shang." Soon it was reported that the people of Shang were so oppressed that no one dared speak. King Wu and Jiang Taigong decided this was the time to attack, for the people had lost faith in the ruler. A bloody battle was fought at Muye (35 kilometers from the Shang capital Yin, now Anyang in Henan province). Jiang Taigong charged at the head of the troops, beat the battle drums and then with 100 of his men drew the Shang troops to the southwest. King Wu's troops moved quickly and surrounded the capital. The Shang king had sent relatively untrained slaves to fight. This plus the fact that many surrendered or revolted enabled Zhou to take the capital.

The Shang king set fire to his palace and perished in it, and King Wu and his successors as the Zhou dynasty established rule over all of China. As for Daji, one version has it that she was captured and executed, another that she took her own life. Jiang Taigong was made duke of the State of Qi (today's Shandong province) and it prospered, with better communications and exploitation of its fish and salt resources.

THE figure of Jiang Taigong has for long captured the popular imagination. He was credited with having written a military book *Liutao* (Six Strategies). Many legends grew up around him over the years. They were collected in the Ming dynasty (1368-1644) fictional work *Fengshen Yanyi* (Tales of Gods and Heroes).

In the river near Xi'an there is a big stone with an indentation said to have been worn there as Jiang Taigong sat fishing. A bearded fisherman is frequently seen in miniature carvings — the figure is traditionally that of Jiang Taigong. □

Lesson 14

HUANG WENYAN

Mending the Fold After the Sheep Have Escaped

楚襄王 (公元前298—263在位)

Chǔ Xiāngwáng (gōngyuán qián 298 — 263 zài wèi)

Chu Xiang King (B.C. 298 — 263 in reign)

依靠四个没有才能, 只会

yī kào sì ge méiyǒu cáinéng, zhǐ huì

rely on four not have ability, only knows (how to)

奉承的大臣, 以致国家很不

fèngchéng de dàchén, yǐzhì guójiā hěn bù

flatter ministers, so that country very not

强盛。有一个忠诚的大臣

qiángshèng. Yǒu yī ge zhōngchéng de dàchén

strong and prosperous. There was a loyal minister

叫庄辛, 劝襄王说: “那四个

jiào Zhuāng Xīn, quàn Xiāngwáng shuō: “Nà sì ge

called Zhuang Xin (who) advised Xiang King, say: “Those four

人荒淫、奢侈, 不顾国政, 如果

rén huāngyín, shēchǐ, bú gù guózhèng, rúguǒ

persons dissolute, extravagant, not concerned state affairs. If

你还宠信他们, 楚国一定要

nǐ hái chǒngxìn tāmen, Chǔguó yīdìng yào

you still unduly trust them, Chu State certainly will

亡国。”襄王不听。

wáng guó.” Xiāngwáng bù tīng.

perish.” Xiang King not listen.

后来, 楚国果然遭到别国的

Hòulái, Chǔguó guǒrán zāodào bié guó de

Later, Chu State as a result suffered other state's

进攻, 丢失了大片土地。襄王

jìngōng, diūshīle dàpiàn tǔdì. Xiāngwáng

attack, lost vast section land. Xiang King

这时才相信庄辛的话是对的,

zhèshí cái xiāngxìn Zhuāng Xīn de huà shì duì de.

then finally believed Zhuang Xin's words are right,

便派人把他找来。

biàn pài rén bǎ tā zhǎolai.

then send someone (have) him summoned.

襄王说: “我以前没听你的话,

Xiāngwáng shuō: “Wǒ yǐqián méi tīng nǐ de huà,

Xiang King said: “I before not listen your words,

国家弄到如此地步, 怎么办呢?”

guójiā nòngdào rúcǐ dìbù, zěnméi bàn ne?”

the country (is) brought to such a state, what to do?”

庄辛回答: “俗话说 ‘丢了羊以后,

Zhuāng Xīn huídá: “Súhuà shuō, diūle yáng yǐhòu,

Zhuang Xin replied: “(A) proverb says, ‘Lost sheep after,

赶紧把羊圈修好, 也还不算晚。”

gǎnjīn bǎ yángjuàn xiūhǎo, yě hái bú suàn wǎn.”

quickly take sheepfold repair well, also still not count (as) late.”

楚国的力量削弱了, 但还有数千

Chǔguó de lìliang xuēruò le, dàn hái yǒu shù qiān

Chu State's power (has) weakened, but still has several thousand

里土地, 只要发奋图强, 是可以

lǐ tǔdì, zhǐyào fāfèn túqiáng, shì kěyǐ

li (of) land, so long as strive (to be) strong, (it) can be

复兴的。”

fùxīng de.”

rejuvenated.”

此后, 襄王重用了庄辛, 收复了

Cǐhòu, Xiāngwáng zhòngyòngle Zhuāng Xīn, shōufùle

Thereafter, Xiang King heavily used Zhuang Xin, recovered

不少失地, 国家也逐渐

bù shǎo shīdì, guójiā yě zhújiàn

not (a) little lost land, state also gradually

强盛。

qiángshèng.

(grow) strong and prosperous.

“亡羊补牢, 犹未为晚”

“Wáng yáng bǔ láo, yóu wèi wéi wǎn”

“(After) escape sheep mend fold, still not regarded as late”

这句成语, 就是从这个故事来的。

zhè jù chéngyǔ, jiù shì cóng zhège gùshi lái de.

this proverb, just is from this story come.

说明事情出了差错, 及时设法

Shuōmíng shìqíng chūle chācuò, jíshí shèfǎ

(It) shows things occur errors, in time find ways (to)

补救, 还不算晚。

bǔjiù, hái bú suàn wǎn.

remedy, still not count (as) late.

Translation

King Xiang of the State of Chu (reigned 298-263 B.C.) relied on four ministers who were without ability but could flatter, so that the country could not become strong and prosper. A loyal minister named Zhuang Xin advised him, saying, “Those four persons are dissolute and extravagant and pay no attention to state affairs. If you continue to trust them so, the State of Chu will surely perish.” But King Xiang would not listen.

Later, as a result, the State of Chu was attacked by other states and lost a lot of territory. Only then did King Xiang realize that Zhuang Xin had been right, and sent for him.

“I didn't listen to you before,” King Xiang said, “and our country is brought to such a state. What can we do?”

Zhuang Xin replied, “The old saying goes, ‘Even after some sheep are lost it's not too late to mend the fold.’ Although the State of Chu has grown weak, it still has territory stretching for thousands of *li*. If we just strive to become strong, it can make a comeback.”

After that King Xiang relied heavily on Zhuang Xin. The lost territory was recovered and the country gradually grew strong.

The proverb, “Even after some sheep have escaped it's not

too late to mend the fold" comes from this story. It shows that if timely measures are taken when something goes wrong, it's still not too late.

Notes

The proverb **Wáng yáng bǔ láo, yóu wèi wéi wǎn** 亡羊补牢, 犹未为晚 (It is not too late to mend the fold even after some of the sheep have escaped) contains a number of characters which are no longer in everyday use today. Here they are with their contemporary equivalents:

Classical	Modern
wáng 亡 (escape)	táopǎo 逃跑
láo 牢 (sheepfold)	yáng juàn 羊圈
yóu 犹 (still)	hái 还 rēngrán 仍然
wéi 为 (be regarded as)	bèi rènwéi 被认为

Everyday Expressions

1. 依靠 **yīkào** rely on, depend on
依靠群众 **yīkào qúnzhòng** rely on the masses
依靠朋友 **yīkào péngyou** depend on friends
2. 强盛 **qiángshèng** strong and prosperous
国家强盛 **guójiā qiángshèng** the country is strong and prosperous
3. 遭到 **zāodào** suffer, meet with
遭到进攻 **zāodào jìngōng** meet with attack
遭到袭击 **zāodào xíjī** suffer a surprise attack
遭到不幸 **zāodào búxìng** meet with misfortune
4. 丢失 **diūshī** lose
丢失土地 **diūshī tǔdì** lose territory
丢失物品 **diūshī wùpǐn** lose articles
5. 削弱 **xuēruò** weaken
力量削弱 **lìliang xuēruò** strength is weak

削弱他的势力 **xuēruò tāde shìli** weaken his forces

6. 差错 **chācuò** mistake, error
出差错 **chū chācuò** errors occurred
这里有差错 **zhèlǐ yǒu chācuò** there are mistakes here

Exercises

1. Answer the following questions in Chinese:
(1) In the proverb "亡羊补牢, 犹未为晚" explain what each character means.
(2) What does this proverb mean?
2. Write the *pinyin* words in Chinese and translate the sentences into English:
(1) 国家弄到 **rú cǐ** 地步, 怎么办呢?
(2) **Hòu lái** 楚国果然遭到了别国的进攻。
(3) **Cǐ hòu** 襄王重用了庄辛。
3. Read the following paragraphs:
庄辛: 襄王, 你依靠那四个人不能把国家治理 (**zhǐlǐ** run, or manage) 好。
襄王: 为什么?
庄辛: 他们只会奉承, 他们荒淫、奢侈, 不顾国政。如果你还宠信他们, 楚国一定要亡国的。
襄王: 不会。
.....
襄王: 我以前没有听你的话, 依靠了他们。现在国家遭到别国的进攻, 丢失了大片土地, 怎么办呢?
庄辛: 虽然我们的力量削弱了, 但是还有数千里土地, 只要发奋图强, 还可以复兴。俗话说: "亡羊补牢, 犹未为晚"。

Asian Population and Development (Continued from p. 29)

more than two. Fortunately, people in India are becoming more aware of the need to reduce family size.

Our government agencies, voluntary organizations, women's organizations and health centers are all making efforts to see that the population is checked through distribution of contraceptives, family planning guidance, and abortions and sterilizations. At the same time we use incentives of all kinds. Men from two-child families are eligible for government jobs, and also receive certain monetary advantages. I don't say we have succeeded, but we are hopeful of solving this problem. We can make people understand the importance of reducing the population only if

we give them advanced culture and knowledge.



Shri Rattansingh Rajda.

China and India both have large populations. We should make every attempt to clear up misunderstandings which arise, since we have had very good relations in the past. If our two countries unite, there will be no insurmountable obstacles and the prospect of world peace will be closer.

We are both developing nations working to modernize our socio-economic structures. If we don't control our populations, economic gains will be nullified by the excessive population. We should strive, each in our own way, to limit our population growth, raise our peoples' living standards and bring them the greatest economic benefits. For this we need peace and good relations with our neighboring countries. □



为中国建设胜利三十周年
之作
壬午冬月于京
王雪涛



Magpie and Plum Painted by Wang Xuetao



Stone Forest



中国人民邮政 8分



中国人民邮政 8分



中国人民邮政 8分



中国人民邮政 8分



中国人民邮政 8分



中国人民邮政 8分

70th Anniversary of 1911 Revolution



中国人民邮政 10分



中国人民邮政 70分

STAMPS OF NEW CHINA

70th Anniversary of 1911 Revolution

The 1911 Revolution which overthrew the Qing dynasty under the leadership of Dr. Sun Yat-sen broke out at Wuchang on October 10, 1911 (Xin Hai Year). China's Ministry of Post and Telecommunications released on October 10, 1981 a set of three commemoratives entitled "70th Anniversary of the 1911 Revolution."

Stamp 1, Portrait of Dr. Sun Yat-sen as Interim President of the Republic, 8 *fen*.

Stamp 2, Grave of the 72 martyrs at Huang Hua Gang, 8 *fen*.

Stamp 3, Site of the Military Headquarters of Hubei province after the Wuchang Uprising, 8 *fen*.

All stamps measure 30 × 40 mm. *Perf.* 11 × 11 1/4. Color photogravured. Serial numbers: J. 68 (3-1) to (3-3).

Stone Forest

China's famous Stone Forest is located in Yunnan province. To show its natural wonders, the Ministry of Post and Telecommunications issued a set of special stamps entitled "Stone Forest" on September 18, 1981.

Stamp 1, Stone Forest in Mist, 8 *fen*.

Stamp 2, Stone Forest in Autumn, 8 *fen*.

Stamp 3, A Stone Forest Pool, 8 *fen*.

Stamp 4, Morning Glow at Stone Forest, 10 *fen*.

Stamp 5, Stars over Stone Forest, 70 *fen*.

All stamps measure 31 × 52 mm. *Perf.* 11.5. Color photogravured. Serial numbers: T. 64 (5-1) to (5-5).