• Wuxi International Fish Center
• Joint Offshore Oil Explorations
• Newly Renovated Section of Great Wall

Australia: A $ 0.72  New Zealand: NZ $ 0.84
U.K.: 39 p  U.S.A.: $ 0.78
A high-yield oil and gas well in Beibu Gulf in the South China Sea—a joint Chinese-French undertaking.
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Front: A student from the Pacific Island Trust Territories at the Wuxi Fish Center — an international training facility co-sponsored by China and the United Nations. Huo Jianying
Back: Aerial sowing of trees will "fix" sand in place and help prevent sandstorms. (See story on p. 31) Chen Changfen

Articles of the Month

Wuxi Fish Center
Opening of new fishery research and training center for Asia and Pacific regions co-sponsored by China and UN. Page 7

Offshore Oil Exploration
Rapid progress, promising results in joint offshore oil exploration projects. Page 24

New Finds About the Great Wall
Archaeological discoveries show Great Wall may once have been ten times longer than usually supposed. Stone tablets, other relics reveal details of building methods. Page 34

Tibetans Tackle Shakespeare
Children of former serfs garner critical and popular acclaim in Shakespeare's Romeo and Juliet. Page 46

Kaifeng: Into the Ancient Painting
A 1,000-year old way of life and cultural heritage can still be seen in Kaifeng, one of six ancient capitals of China. Page 60

General Distributor: GUOJi SHUDIAN, P.O. Box 399, Beijing, China.
Loves China

At present I live in Geneva and study international relations. I'm Japanese, but greatly love China. I happened to find your magazine and was very interested in it, especially in “Zhenjiang—the Foremost Landscape under Heaven” and “A Chinese Painter Who Works Abroad” (April 1981). The latter reminds me of my grandfather and my parents, who all lived in China many years ago. They love China, where they spent their childhood. They also think fondly of the beautiful scenery and customs there. I hope I will be able to visit China someday and make friends with you.

JUNKO IZUMI
Geneva, Switzerland

Chairman Mao Still Lives

I send my best wishes to the government and people of China on the 60th anniversary of the founding of the Chinese Communist Party. Although Chairman Mao is dead, in some ways he still lives—for example, in the recent speech made by the present Party chairman, which was read on Radio Peking July 1, 1981, and which impressed me very much.

Since our popular revolution in Liberia took place on April 12, 1980, I have read about 38 copies of your magazine through which I learn the true meaning of revolution.

PETER D. JEPLEH JR.
Buchanan, Liberia

Hopes for Reunification

I am very glad to read the article about Zhenjiang (April 1981), one of the places I'm going to visit during my trip to China this year. Through it, I got to know something about the city and its surroundings.

"What's This 'Taiwan Question'?" (May 1981) is still better. I've been to Taiwan province, and heard about many disturbing happenings there. It is difficult to keep quiet about them, but the people there have to remain silent, or their security is threatened. I hope China will be reunified.

HILDEGARD NURNUS
Weilburg, West Germany

Soong Ching Ling’s Legacy

Please accept our deep condolences on the passing away of Soong Ching Ling.

She fought all her life for the birth of a new China, especially for the establishing of a great united front. We were deeply touched by her dedication.

We hope that you will carry out Soong Ching Ling's behests and keep your magazine improving and developing. We'll encourage each other and advance together with you.

FUKUI HAJIME
Tokyo, Japan

Skeptical

I take copies of China Reconstructs to my classroom for my twelve-year-old students to read. They are interested in the great variety of information you present about China. I think they like the shorter articles and I know they are fascinated with the pictures.

One question: does nothing go wrong in China? In your efforts to be positive about China's great accomplishments since the revolution of 1949, you do create skepticism. Can any society be that perfect?

MARGARET GEILAN PLOSS
Oakland, California, U.S.A.

We hope you have read by now "Summing Up: Mao Zedong, the Cultural Revolution and 32 Years of New China" (October 1981), which details not only the achievements but the mistakes made since liberation.—Ed.

China’s Biggest Dam

I am interested in the construction of China's biggest dam, the Gezhouba project on the Changjiang (Yangtze) River. The article in the February issue on this project was excellent. I hope to read in a future issue that the July flood did not damage it.

WILLIAM P. GAMBON
San Diego, California, U.S.A.

Our October 1981 issue included a major cover story on Gezhouba and the happy news that the flood caused no damage.—Ed.

Distinct Approach

As a subscriber to several magazines from abroad, especially from the West—the U.S., U.S.S.R., Federal Republic of Germany—I find a distinct approach in your magazine. The beautiful color photographs of city and rural scenes are also enchanting. We people in Tamilnadu, who hold first place in reading journals among Indians, expect more news about our continent, especially the East.

S. KALIMUTHU
Tamilnadu, India

Improvements Appreciated

In America I used to read your magazine from cover to cover whenever I had the chance. But for the past two years that I have been living and working in China, I just haven't had the time or opportunity. Little did I know what I have been missing! I've just finished your January 1981 issue. I'm very pleased and impressed by the improvements you have made in content, format, and writing. Your hard work should be praised.

On your article about Urumqi, I greatly appreciate the writer's sensitivity towards the Uygur people and their way of life. In the past some of your articles unintentionally carried a patronizing tone towards minority peoples. The article also showed that the writer had done careful research into the history of Urumqi and the surrounding region. Overall, the article was well researched, well organized, and well written.

LARANDA MARR
Changchun, China

More about Social Life

I'm writing you this letter for more articles about social life in China. We are interested in this topic because the people of Mozambique, who have only recently achieved independence, are now advancing towards socialism. Our country is backward and requires development. I want to learn from your experience.

ALBERTO AUGUSTO
Mocuba, Mozambique

Minority Peoples

I always read with great interest articles like "The Tu People of the Qinghai Plateau" (January 1981) which provides information about the special environment of minority peoples in China's outlying areas and about their life and customs.

HEIMZ-GUNTER FOERSTER
Bielefeld, West Germany

TO OUR READERS

January 1982 marks the 30th anniversary of the founding of China Reconstructs. On this occasion we hope our readers, both old and new, will write us in detail their impressions of the magazine, suggestions for improvement, and topics they would like to see covered.—Ed.
A small girl.  
Liu Wenxi

Reading for grandpa.  
Liu Jinan

Lathe operator.  
Liu Yongjie

Homeward bound.  
Zhang Xiaoqin
‘Heavenly Hemp’

LIU LUSHAN

It has a long slender stalk topped with a spike of yellow flowers and a fleshy tuber underground. It is found chiefly in the mountainous regions of Sichuan, Shaanxi and Hubei provinces in central and southwest China, and its tuber has long been known to connoisseurs in Chinese traditional medicine for its excellent effects in treating a number of disorders, among them dizziness, headache, rheumatic back and knees and convulsions in infants.

the tubers had grown feet and absconded, and encircled the fields with stones to keep them from running away.

However man’s wisdom has finally penetrated “heaven’s” secrets. Tianma is now grown on large areas in the southern part of Shaanxi province, thanks to the efforts of a pharmacologist by the name of Xu Jintang. Local people mention him with respect and gratitude when they talk of the latest breakthroughs in tianma cultivation, now providing the state with a valuable crop and the peasants with a lucrative source of income.

A graduate of the Shanxi Agricultural College in 1958, Xu Jintang was assigned to the Institute of Pharmacology of Chinese Academy of Medical Sciences, which sent him to investigate herb cultivating methods of the Fubaoshan medicinal herbs farm in Hubei province and the Huangshui farm in Sichuan province.

At Fubaoshan, Xu’s interest was caught by the tianma growing wild in the mountains there. He knew that it was becoming scarcer as people searched for and unearthed the valuable plant, but no one had succeeded yet in domesticating it. Was it impossible to grow them artificially? His sense of responsibility as a pharmacologist urged him to give it a try.

Obtaining some tianma tubers Xu Jintang planted them just as one would plant potatoes. But they did not sprout. Digging them up again he found they had rotted. The next year he used a different method of planting but again they failed to grow. He then asked some medicinal herb growers who knew where to find tianma to take him up Fubaoshan Mountain, there to make a survey of the plant’s growing habits and its relation to the environment.

Every ten days, regardless of the weather, he dug up some tianma and recorded his observations. Once, weakened by a severe bout of dysentery, he nevertheless continued his investigations, getting about with the help of a cane. In several years, Xu wrote down several dozen voluminous studies and completed a preliminary summing-up of tianma’s propagation pattern.

In 1964 tianma was formally made a subject of scientific research by the State Institute of Pharmacology, which assigned Xu two helpers, Ran Yanzhu and Chen Zhen. The work went faster after that. Xu had noticed a dark threadlike growth near patches of tianma. Gatherers called the growth “notice-giver”, since it told them where to look for the tubers. Why was that so, and what was the relation between it and tianma?

This problem engrossed Xu. Once, waking up in the middle of the night he noticed a bluish light emanating from under his bed where he had put some tianma. Breaking apart one the gleaming tubers, he found it was starting to rot and was full of a white fungus and its hypha, as the dark threadlike growth turned out to be.

The next morning Xu took the tubers to the institute where Ran Yanzhu was engaged in research on fungi. She isolated from them a fungus called armillaria mellea Quel. Ran then went with Xu into the mountains to study the ecology of the fungus in the wild state. They finally proved that tianma must coexist with armillaria mellea Quel. Having no roots or chlorophyll, tianma cannot manufacture its own nutrients and depends on armillaria mellea Quel for nourishment.

This discovery threw new light on the propagation process of tianma. Xu Jintang and Ran Yanzhu obtained some tree roots with armillaria mellea Quel growing on them, and planted them together with tianma. Soon new tubers appeared, some weighing as much as 0.25 kilograms. Not long

LIU LUSHAN is a reporter for the Guangming Daily.
afterwards cultivation of *tianma* with artificially bred *armillaria mellea Quel* was successfully tried out.

**Sealing New Heights**

In 1972, Xu Jintang went to Ningqiang county in Shaanxi province to make further researches into the cultivation of *tianma*. The village he stayed at had succeeded in cultivating *tianma* in 1970, but output was only 0.2 kilograms per cluster and the survival rate of the plants was low.

Xu Jintang directed his energies toward raising the per-unit output of *tianma* and to popularizing its cultivation over large areas. His aim was to find a convenient and surefire method of cultivation for the local peasants. Instead of centralized cultivation of the fungus, he thought, would it be possible to breed it in scattered beds and then plant *tianma* directly in the breeding beds? Experiments with the assistance of peasants showed that this method raised both the rate of survival and the output of *tianma*. The new method quickly spread throughout the region.

New problems, however, cropped up. Xu found that asexual propagation of *tianma* led to degeneration of the tubers after several generations, resulting in reduced yields. The only way to rejuvenate and enlarge the stock was to practice sexual propagation.

But this was more easily said than done. *Tianma* seeds are as fine as powder—the fruit of the plant, no bigger than a hazelnut, contains 30,000 to 50,000 of them. Each seed consists only of an embryo and the outer skin. It has no receptacle for storing nourishment, which makes germination of the seed extremely difficult.

As Xu pondered over the problem, he remembered hearing a herb grower remark once that *tianma* grew out of termite eggs, because he had seen many such eggs under fallen leaves in places where he dug up *tianma*. Xu had laughed off this absurd statement at the time, but now it rang a bell in his mind. He surmised that those so-called termite eggs were actually rudimentary corm—subterranean stems—put out by sprouting *tianma* seeds. Was it then the fallen tree leaves that provided the seeds with the necessary conditions for germination?

He sowed seeds on breeding beds covered with tree leaves. Two thirds of the seed clusters sprouted. Thereafter he planted more than a hundred clusters of seeds and the germination rate reached 98.9 percent. One and a half years later each cluster yielded 1.35 kg. of *tianma* on the average.

*Tianma* stock bred by sexual propagation in beds covered with leaves yielded more than double the amount of tubers produced by asexually propagated stock.

More than 20 years have passed since the aspiring young pharmacologist began his researches on *tianma*, and Xu is now in his fifties. He has been suffering from a heart condition since 1974 and doctors advise him to rest. But Xu, with a first-aid kit, still goes into the mountains as usual, his mind and soul dedicated to the cultivation of *tianma*.

Artificial cultivation of *tianma* has found much favor with the peasants and gets support from the local government in Shaanxi province. In 1975 and 1976 the provincial authorities ran more than 100 study courses to popularize the technique. To help popularize the technique Xu Jintang himself has been to 16 counties in and around the Hanzhong region in Shaanxi province.

Today peasants in the Qinling and Dabashan mountains in Shaanxi province plant *tianma* on hill slopes, around houses and in their courtyards, making the province one of China’s major producers of this medicinal herb. Last year, purchasing stations in the Hanzhong region of Shaanxi province alone bought more than 240,000 kg. of fresh *tianman*.

The leaf-bed method of raising *tianma* created by Xu Jintang, Ran Yanzhu and their colleagues last year won a second prize from the Science and Technology Commission. Recently they have isolated from tree leaves the symbiotic fungi needed for the germination of *tianma* seeds, effecting a new breakthrough in their continuing efforts to probe the secrets of the “heavenly hemp.”

![Tianma harvested in Ningqiang county, Shaanxi province.](image)

Yao Zongyi

NOVEMBER 1981
The Useful Yak

WANG CHUNSHENG

In antiquity, according to zoologists, the yak was a fierce wild animal—the terror of wolves, panthers and even bears. We owe the mild-mannered, useful animal of today to the domesticating efforts of the Qiang people (an ancient Chinese nationality group). Yaks are a distinctive feature of traditional Tibetan life, and 40 percent of all the yaks in China now live on the grasslands of the northeastern Qinghai-Tibet Plateau in Qinghai province.

A type of oxen related to the American bison, the yak has short smooth hair on its back, long wavy hair on its breast, sides and short legs, and a bushy tail. An adult male can weigh up to 150 kilograms. It is well adapted to Tibetan highland conditions—able to withstand cold and oxygen-poor air, strong and enduring, and sure-footed in climbing mountains and crossing rivers. In cold winter months they are still the major means of transport in Tibet. In mid-spring herdsmen heap all their belongings on yaks as they move the herds to summer pastures.

Besides being a beast of burden, yaks provide milk and meat for food, and hide and hair for clothing, boots and tents. A female produces between 150 and 300 kg. of milk a year. The staple Tibetan food is made by mixing roast qingke barley flour, tea, and yak butter and milk. Every year Qinghai province's 4.8 million head of yak provide 100,000 beef carcasses and 300,000 hides for the market. Yak beef is sold as far away as Hongkong, and half the hides are shipped to large industrial cities such as Shanghai and Tianjin.

Products made of yak leather are durable and of high quality, much prized by consumers. Gold Cup brand sport shoes made of yak leather are a growing export. Sweaters made of yak wool are warm and beautifully colored. Yak tail hair is strong, smooth and resilient, and has long been used for such varied products as fly whisks and false beards for traditional opera performers.

Because the yak has lower reproduction rates than other domestic livestock, and the young take a long time to mature, attempts have been made to interbreed the yak with similar species. The crossbreeding of yaks with domestic cattle was accomplished some time ago, but the results are not entirely successful. The offspring do not consistently inherit the most desirable traits from each breed, and the male offspring are sterile.

In recent years scientists have had more success in crossing yaks with certain types of oxen. Some of the hybrid offspring have produced double the milk and meat of the ordinary yak, and the time required to reach maturity is half again as short. A research institute set up in 1979 by the livestock research departments of Qinghai, Gansu and other provinces is now conducting further experiments in crossbreeding. The yak of the future should have all the strengths of its ancestors with none of the defects.

A hybrid offspring of yak and ox.
China's Role in International Fish Research

FRESHWATER fish-farming of one kind or another has been carried on in China since ancient times. The development of China's fish-raising industry during the 1960s and 1970s, including a number of major scientific breakthroughs, has captured international attention and led to the establishment of several research and training programs co-sponsored by United Nations organizations.

The first project—co-sponsored by the UN Food and Agriculture Organization (FAO) and headed by Professor Zhong Lin, whose research has revolutionized fish-breeding techniques—lasted from 1975 to 1980, and trained a number of young professionals from third world countries. (See "Zhong Lin—Breeder of Fish.")

Meanwhile, China's techniques of integrating fish-raising with other agricultural activities in ecologically balanced systems (see diagram) had aroused the enthusiastic approval of an FAO-sponsored investigation team. The team called such systems "masterpieces of ecological energy-saving," and recommended them as particularly suitable for developing countries all over the world.

The success of the training program headed by Professor Zhong and the report of the FAO investigating team led to the decision by several UN bodies to co-sponsor a fishery research station at Wuxi, Jiangsu province; this is the fourth such station to be established in Asia. "Wuxi Fish Center Hosts Foreign Scientists" tells about life and work at this new international learning center.

LAST June a new international learning center opened at Wuxi, Jiangsu province, 130 kilometers west of Shanghai on the shores of Lake Taihu—one of China's five large freshwater lakes. Sponsored jointly by China's General Administration of Aquatic Products and the United Nations Development Program (UNDP) and Food and Agriculture Organization (FAO), the official name of the center is the Integrated Fishery Research and Training Center for Asia and the Pacific Region in Wuxi. Understandably, almost everyone calls it the Wuxi Fish Center for short.

Professor Lu Gui, director of the center and former head of the freshwater products department of the Shanghai Aquatic Institute, describes the three main functions of the center as training young professionals from other countries, scientific research, and exchanging technical information with other fishery centers around the world.

The research and exchange functions of the center are still in the developmental stage, but the training program is already in operation. Two courses of four months' duration will be held each year.

XIAO JUN is with the General Administration of Aquatic Products.
LI CHUANG is a staff reporter for China Reconstructs.
The center's teaching staff includes associate professors and lecturers from the Shanghai Aquatic Products Institute and researchers from the Changjiang Aquatic Products Institute. Trainees spend half their time in classrooms and the other half doing field work, either at the center itself or on the outskirts of Wuxi, where fish-raising in ponds is a highly developed industry. Occasional study tours are made to the nearby cities of Shanghai, Suzhou and Zhenjiang.

One of the major reasons China was chosen as the site of the new center is China's experience in developing fish management systems that are integrated with other agricultural activities. For example, a production team might combine fish-raising with raising silkworms in mulberry trees, pigs and pig fodder, soybeans and grain. The waste from the pigs and the silkworms are then used to feed the fish. The grain may be used to distill spirits, and the soybeans to make beancurd, with the waste from both again used as fish food. At the same time, fish-pond mud, enriched by fish droppings, makes excellent fertilizer for the grain, soybeans, vegetables and mulberry trees (see diagram).

Such systems save money and energy by recycling waste products, provide jobs of many kinds, increase farm income and help meet market needs. Their simplicity and efficiency make them particularly suitable for the developing countries, and the center's current class of 20 trainees come from Korea, Bangladesh, Thailand, Burma, the Philippines, Nepal, Malaysia, Sri Lanka, Fiji and the trust territories in the Pacific. All are college graduates who have a background in biology and aquaculture as well as three years' experience in practical work.

Life at the Center

When asked about their impressions of China, most trainees speak
Wuxi International Fish Center.

The center's trainees are from ten different countries and regions of Asia and the Pacific.
Teaching is divided equally between classwork and practical demonstrations.

The class watches workers clear a commercial fish pond on the outskirts of Wuxi.
Guided by a Chinese teacher, a student removes the pituitary gland of a fish.

Learning to speed herring propagation by artificial means.

A film on artificial incubation.
Providing dishes for an international clientele is a real challenge for the cooks.

Trainees have discovered that music is a universal language.

Taihu Lake.

Photos by Huo Jianying
of the beautiful landscapes, the rich ancient culture and the friendliness and warmth of the Chinese people. The setting of the center itself is quite beautiful, bordered on three sides by mountains and on the fourth by the lake. The 12.5 hectare campus features many flowering plants and trees, and includes a 2.4 hectare experimental fish pond and a tea plantation. The dormitories, recreation rooms and dining hall are linked by a long corridor in the style of traditional Chinese architecture. The library has a more Western air, and is surrounded by gardens with flower beds, pebble paths and small bridges over flowing water.

The trainees say that they owe a great deal not only to their teachers but to other staff members at the center. Staff members indeed seem to have grown fond of their foreign guests, and have tried hard to make their stay as pleasant as possible. The two cooks have spent many weeks learning the different food preferences of the trainees, and the dining room now offers 18 different selections daily at lunch and supper.

As "bridges" between the trainees and Chinese teachers and staff, the center's interpreters spend much of their time with the foreign trainees. These young people in their 20s enjoy their work, and seem not to mind the long hours and effort involved. Xiao Zhao, 27, has worked with foreign fishery trainees since the beginning of the program at the Zhuijiang Research Institute in 1975 (see "Zhong Lin — Breeder of Fish"), and has formed a number of close friendships. He corresponds regularly with many trainees who have returned to their own countries, and takes a great fraternal interest in their careers.

International Friendship

One of the former trainees Zhao remembers best is Maciu, a dark-skinned young man from Fiji. Before he came to China, Maciu had heard that there were many taboos and restrictions in Chinese society.

Afraid of making mistakes and giving offense, when he first arrived he was very stiff and restrained. But the warm support of the teachers and staff convinced him that China was far less formal than he had supposed, and gradually he began to relax. When he returned to Fiji, he told his fellow countryman, Bulia — who was about to leave for the Wuxi center — about his experiences.

This was good news to Bulia, who would have found it difficult to repress his puckish grin, his frequent jokes and outgoing personality. At 25 Bulia is the youngest of the current trainees, but he is so well-liked and respected that he was unanimously elected class leader. He and his guitar are invariably the center of attention at off-hours songfests. Yet he is a serious student and always willing to help others. Although for safety's sake the trainees have been asked not to go into the fish pond, Bulia does so all the time. He is always eager to learn not just from his teachers but from his more experienced classmates such as Ahmad and Molla, both men in their 40s from Bangladesh.

Unlike Bulia, Ahmad is shy and reserved in social situations, but he is one of the most active participants in class discussions. His incisive questions and relation of theoretical points to the actual situation in his own country have deepened the understanding of all the trainees. An expert in his own field — biology — he is frequently consulted on academic questions.

Although they are from many different countries and backgrounds, the trainees' common professional interests have drawn them together. Animated discussions of technical details take place inside and outside of class. They enjoy teaching one another the songs and dances of their respective countries, and on class trips the bus resounds with song and laughter.

In China the trainees have had a chance to grow professionally and to explore a new culture, but they have also found many things in China that make it less strange than they once imagined. Bullia describes his stay in China as "a move from one home to another, since many of China's customs and traditions are very like those in Fiji." Kanthi from Sri Lanka would agree. A devout Buddhist, she worried that she would not be able to practice her religion fully in China. But soon after she arrived, she discovered a 1,400-year-old Buddhist temple near the center, where she now prays regularly along with Chinese worshippers.
Zhong Lin — Breeder of Fish

I love fish," said the ancient philosopher Mencius. Professor Zhong Lin of the Zhujiang (Pearl River) Aquatic Products Research Institute also loves fish, not just on the dinner table, but as a lifelong object of scientific study. Zhong Lin is known throughout China for his research in fish-breeding methods; international recognition of his work came when the Food and Agricultural Organization (FAO) of the United Nations asked him to head a long-term training program for freshwater fish breeders from Third World countries. FAO programs are usually placed in the most advanced technological countries, and their choice of Professor Zhong is a reflection of his standing in the international scientific community.

Now in his 60s, this white-haired scientist received his training at the Guangdong Aquatic Products School and Hongkong University in the 1930s. When the new China was founded, he gave up a lucrative position with the Hongkong department of fishery to take part in the socialist reconstruction of the motherland. In the 1930s a severe shortage of fish in Guangdong province rivers prompted Zhong Lin to try once again to discover a way to breed carp and bighead artificially in ponds. Chinese experts had tried to do this for years, and failed. The Japanese scientist Kawamoto Sachiyuki had pronounced it impossible after nine years of research.

To observe the fish and their habitat, Professor Zhong and his assistants waded through practically all the rivers and streams in western Guangdong and Guangxi provinces and on Hainan Island. Countless experiments were carried out to determine the internal biological mechanisms of the fish.

Professor Zhong finally mastered all the internal and external factors affecting breeding. He found that when all the external factors, such as water temperature, were just right, a hormone which stimulates breeding was automatically released in the fishes' bodies.

COULD the breeding process be speeded up by synthesizing the hormone and injecting it at times when external conditions were not appropriate? An exhaustive search through the scientific literature and a long series of experiments brought part of the answer: the hormone could be made in the laboratory from extracts of the pituitary gland of certain fish and from the urine of pregnant women. In 1958 Professor Zhong successfully induced breeding through hormone injections, and by 1960 a comprehensive method of breeding fish artificially in ponds had been worked out.

Reports on this research caused quite a stir in China's scientific community, and by 1965 Professor Zhong and his colleagues had written a long, detailed text called Biology and the Artificial Reproduction of Domestic Fish. As a result of this scientific breakthrough, mackerel, grass carp, silver carp and bigheads can be grown artificially in special breeding ponds, thus revolutionizing China's freshwater fish industry.

Professor Zhong has received a number of awards and honors from China's scientific organizations and the Chinese government. But all his honors do not mean as much to him as the accomplishment of a lifelong goal: increasing the production of fish for people to eat. And not just the Chinese people. Between 1975 and 1980 Professor Zhong headed eight training courses sponsored by the FAO and the Zhujiang Research Institute for 140 students from about a dozen countries, including India, Indonesia, Sri Lanka, Bengal, Malaysia, Nepal, Thailand, the Philippines, Burma and Pakistan.

Prof. Zhong has always stressed first-hand observation of fish and their habitats.
OVER a thousand music lovers gathered last May in Beijing for the farewell performance of soprano Lang Yuxiu. As Lang began to sing in the soft, sweet voice that belies her 63 years, those over 30 were swept by old memories, for many of the most-loved songs of their youth were first sung by Lang Yuxiu: Chinese songs, foreign songs, patriotic songs which gave people hope and courage. The graceful woman in the long black and gold gown did not disappoint them. She sang Chinese folk songs of many different moods and flavors, opera favorites in the Beijing, Suzhou and Guangdong styles, and a number of foreign songs—Japanese, English, French, German and Russian.

At the end of the performance, people rushed to the stage, their arms filled with flowers. "Wonderful, beautiful," was heard on all sides. "Please don't retire; you can sing for another ten years!" This scene had been repeated again and again in all the cities she had visited on her farewell tour—Chengdu, Chongqing, Kunming, and Tianjin.

Lang Yuxiu is known and loved by virtually everyone in China, and they show their affection in large ways and small. Because she loves black tea, shop assistants in local tea shops always put some aside for her when they are running low. Lang has earned this affection through her life-long concern for her art and for her audiences. A heavy schedule of over 100 performance a year has not been unusual for her; once she refused to cancel a performance even with a leg injury so serious.

YANG SHUYING is with the French section of Radio Peking.
that she had to be carried on stage. Long hours of teaching—she is professor and dean of the vocal music department of Chengdu's Sichuan Conservatory of Music—have not diminished her constant practice sessions, nor her conviction that there is always something new to be learned. And beyond all of her professional commitments, she has managed to raise nine children! A few days after her farewell performance, I visited this remarkable woman to find out more about her background.

**Early Training**

Lang Yuxiu was born in Shanghai, the daughter of noted photographer Lang Jingshan who roused her earliest interest in music. When she was five, her parents' arranged marriage broke up, and she stayed with her father, while her mother and younger sister returned to their home village. Her music-loving father spent much of his spare time listening to the gramophone, his remaining daughter by his side. Soon she was singing along with the recorded music.

Convinced of her gift for music, Lang Yuxiu's father enrolled her in the Shanghai Central Music Conservatory when she was 15; a year later she received her first award for a performance of *Madame Butterfly*. Some time later she recorded "Song of Family Happiness" by the noted composer Huang Zi, about an orphan's longing for a new "family"—a society based on brotherhood and love. A series of other records, "Trouble in My Old Home Town," and "Wilted Blossoms," brought her great popularity. After the Japanese invasion of China, Lang's versions of patriotic songs lived in people's minds and helped give them the courage to fight the invaders. Among the songs of this period were "Song of the Earth," and "Street Singers Under the Iron Heel."

At about this time Lang's father, convinced that her voice needed further training, borrowed money from friends to send her to the Royal Conservatory of Music in Brussels, Belgium. Her talent and her diligence as a student attracted the attention of her teachers, among whom were Joseph Jongen, head of the conservatory and a renowned composer, and soprano Marguerite Thys. Today Lang recalls Thys with great fondness, as a warm and caring person who nevertheless demanded hard work and discipline from her students. Lang spent four years at the conservatory, living in a dormitory with 40 French-speaking girls and spending vacations either at the houses of classmates or in the home of an old musician with the Paris Opera. She graduated with excellent marks, returned to China, married and had two children. In 1946 a scholarship brought her another chance to study abroad, taking her to Cincinnati, Ohio, in the United States. After two years she returned to Chengdu, where she has taught and lived for 33 years.

**Rediscovering Chinese Music**

Lang had absorbed a great deal of Western music and Western ideas in her years abroad. Today she says, "For a long time I believed in the concept of 'art for art's sake.' I come from a family of music-lovers, and music was
my world. I couldn’t see any connection between music and politics or any other worldly consideration. After liberation my life and my thinking changed. When I began to sing for PLA units and for people in the countryside, I reached a new understanding of what my art was for. Ever since I have wanted to use my talents to serve the broad masses. To do that, I realized. I had to learn a lot more about Chinese music.”

Lang traveled to different areas of the countryside to collect folk music and master local musical styles. She learned a number of classical opera styles—Suzhou, Sichuan and Beijing. She was particularly influenced by the jingyan dagu, a form of ballad singing which originated in Beijing, and which was highly rhythmic and demanded very clear enunciation. Her studies of Chinese music bore fruit in her own performing style, which draws on the best of the Chinese and foreign traditions. When she visited France, Italy and Switzerland in 1956 as part of a cultural delegation, foreign critics referred to the velvet smoothness of her voice.

But talent and technical skills, Lang believes, are not everything in music. A truly good singer needs to draw on rich emotions, and convey those feelings to the audience. She finds it helpful when she sings, to hold in her mind a mental image which has deep emotional meaning. When she sings “Taiwan Island” or “The Oranges of Meijiawan” she thinks of her 90-year-old father, now on Taiwan, whom she hasn’t seen in 30 years. When she sings her favorite “Cradle Song,” she thinks of her own children as babies.

A Devoted Family

Accompanying Lang Yuxiu on her farewell tour were her husband Xiao Ji, a retired surgeon of 71, and her eldest daughter Xiao Tong. Lang Yuxiu told me that a great deal of the credit for her uninterrupted musical career of over 30 years belongs to her husband and “beloved partner.” When we began to interview, Dr. Xiao was busy in another room sorting music tapes and other materials. After he joined us, I asked him about his part in her career. He started with an account of their first meeting, which was due to their common interest in music. Attending the graduation performance of her class at the State Conservatory of Music in Shanghai, he was so impressed by her musical talents that he wanted to meet her. “Unfortunately,” he went on, “at the performance I couldn’t see much of her but her back. But a year later, as she was preparing to go to Belgium, I arranged through a friend of mine to become her French teacher.”

“Do you know the first French word he taught me?” Lang interrupted with a laugh. “Aimez!”

The language lessons led to a happy and fulfilled marital partnership. Dr. Xiao has provided not just emotional support and encouragement, but a great deal of practical help in her career. He does much of the housework, helps answer countless letters from admirers, and oversees details of performance tours and of her large collection of musical materials. He is the first to hear every new song she sings, and she takes his advice seriously.

The couple’s nine children grew up in a musical environment, and four have followed musical careers. One son is a composer, another a clarinet player, and a third plays the trumpet. Their elder daughter, Xiao Tong, is a piano accompanist at the Chongqing Opera House, and acted as her mother’s accompanist on the farewell tour.

I asked Lang for her thoughts on bidding farewell to the stage. “I’m getting old,” she said, “I’ve so much teaching and translating work to do, and duties as a member of the National People’s Political Consultative Conference and vice-chairman of the Sichuan branch of the Chinese Musicians’ Association. I need to give my remaining time and energy to the training of the younger generation. But please understand that giving up public performances does not mean giving up music. I will never, never say good-bye to music.”

A close-knit and loving family: some of Lang’s nine children now have families of their own.
New Women Writers

A number of exciting new writers have appeared on the literary scene since the end of the “cultural revolution”. Not all of them are young—indeed, a number are middle-aged—but they are at the beginning of their writing careers. The cultural autocracy of the gang of four had a devastating effect on all of Chinese literature, and nipped many promising careers in the bud. On the other hand, some who had never thought of writing turned to literature relatively late in life to express their deep concern for the social effects of the ten lost years and their hopes for the future.

China Reconstructs has asked four of the most popular new women writers to tell us about their life and work. The short stories and novels of these writers have attracted considerable attention because of their sharp insight into problems and social phenomena that are very much on the minds of the Chinese people. Their life stories are also entwined with the history of their times, and as such have more than personal interest. Two self-profiles, that of Chen Rong and Zhang Kangkang, appear in this issue; two others will appear at a later date.

How I Took Up Writing

CHEN RONG

In my early years I never thought of becoming a writer. I was a lively and life-loving young girl, and a member of the Youth League. In 1951, at age 15, I started work in a bookstore, and then was transferred to an editorial office. Because I was thought to have some potential, my unit sent me to college; I was one of the first worker-students. I became a music editor, and later a Russian translator. I married and had a son. I was very happy, and thought my life had just begun.

Then everything changed. I fainted one day at my typewriter, and was unconscious so long that I was taken to the hospital. Soon I began to faint more and more often. My problem was diagnosed as periodic shortages in the blood supply to the brain, a condition that could not be completely controlled. When I could no longer do my work, I was asked to take permanent sick leave. I would not complain or ask for mercy—I simply walked away. For a time I became a teacher, but now I fainted in the classroom and they couldn’t keep me. I found myself unemployable, though I had a disability pension. No doctor could guarantee my fainting spells would stop or issue the necessary health certificate.

For over ten years I lived the dreary life of an invalid.

An illness like this attacks not only the body, but the spirit. It was painful to feel that I was no use to society. At the time I felt there was no warmth from other people, only indifference and reproach. I was still young, but I felt so bitter and lonely that I thought these feelings alone would kill me.

I tried to fight my depression, to find sources of happiness and hope. But life seemed so cruel. What could I do—give in to my despair? No, not that. Go on as I was? No, never. Struggle against my fate? With my sick body, my ignorance, my lack of experience with life, what form could this struggle take? Others hurried to work every morning and came home to their varied interests. I was left behind, shut up in a little room with nothing but illness and melancholy to pass the hours until sunset. The burden of idleness, the sense of time wearing away with nothing gained, was unbearable. I longed for some spiritual or intellectual occupation.

CHEN RONG is a woman writer in her mid-40s. Her works include the short novels It Is Spring Forever and Approaching Middle Age—the latter a major popular and critical success.
I began to collect stamps. For a time the pictures of landscapes, strange birds and animals, heroes and historical events, drew me back into the world. But it could not occupy my time or fill the void in my mind. I tried painting, an old childhood love. But now it was only escape from loneliness, and not a successful one.

As much as I could, I began to attend plays and operas. For a few hours I was moved by the joys and sorrows on the stage, the fictional partings and reunions. But when I left the theater, I returned to my empty life. I attended dances. But even amid the soft lights, the gentle music, the happy crowd I felt alone. And when I walked out into the dark street, I would realize all over again that nobody would really need me tomorrow. I cooked and sewed and, washed clothes, and while the domestic chores kept me occupied and gave me some sense of accomplishment, I could not pretend they were of any significance to society at large.

And I read extensively—Chinese and foreign, classical and modern works. As a child I had loved books, but only now in my idleness did I really begin to analyze them. Much of what I read laid the groundwork for my later writing, though I did not know it at the time. I kept a diary and did some translations. I started a novel about college life, but after two chapters threw it into the fire. But these few efforts sparked a ray of hope. I couldn’t work eight hours a day, but why couldn’t I write between bouts of illness?

Fine. But what could I write about? The thing I knew best—my illness—was not worth recording. Shut away from human beings, how could I write about them? I felt I did not understand enough about life, or about different types of people. I needed to go into society—what Maxim Gorky had called his university.

Some kind-hearted friends found a small village at the foot of the Luliang Mountains in Shanxi province in northern China, where I could settle for a while. I said goodbye to my husband and son and left the bustling city. I felt free at last of the silent disdain of other people, free to start a new life.

I lived among peasants who started work at sunrise and came home after sunset. They were simple and honest. They didn’t ask questions about my misfortunes. In the city, I had never seemed to see the sun or the moon. In the countryside, I began to notice the beauty of the sunrise, and how bright and pure the moon is in the sky. Country paths are quiet and the air fresh. Everything around me flourishing, healthy and strong. I began to sense the vastness of the universe and the vitality of life itself.

The kindness of the peasants healed old mental wounds. The eternal cycle of farm work—spring sowing and autumn harvest—gave me a sense of purpose in all living things. The vitality all around me seemed to give me new courage and strength. Compared with the infinity of nature, my troubles seemed as nothing.

I met all kinds of people, from peasants to brigade and commune leaders, from foresters to county and provincial Party secretaries. I began to share their lives, their successes and failures, their hopes and fears. I even began to share in their work. I could feel myself growing stronger and stronger. And I began to write again, with much deeper inspiration than before.

This was the turning point of my life, a turning away from death and toward life.

Now, when I take up my pen, all my ideas, all the people and events, the joys and sorrows I have known seem to flow to the point of my pen. All of my past—including parts I once thought useless—have become the raw materials for my writing. Paintings I have seen help me paint clear pictures in words. Remembered incidents from plays and operas help me resolve one conflict after another. Even the simple act of cooking helps me concentrate on describing details. Literature transforms what is trivial into the very stuff of life, what is decadent into strange and eventful happenings. For a writer, reading is not the only source of inspiration, but every small act of life.

When I started writing, I did not know how rocky the road would be. Sometimes I sweat and bleed at every step. But I have no regrets, not because I can call myself “a writer,” but because I deeply love writing. It gave me life; it is my life.

Becoming a Writer

ZHANG KANGKANG

I was born in 1950 in Hangzhou, the capital of Zhejiang province—so I am almost the same age as our new China. Hangzhou is famous throughout China for its beautiful surround-

ings—its West Lake nestled at the foot of craggy, cave-filled

ZHANG KANGKANG, author of several novels and a number of short stories, is at 38, one of China’s most promising young woman writers.
mountains — and all my life I have carried with me a love of nature. I grew up with the country, attending the new primary and middle schools established by our socialist China. My parents are intellectuals who joined the revolution in the late 1940s — my father a journalist, my mother a teacher and amateur writer of children's stories. Literature was a natural part of my childhood. I can remember, when I was four, getting up on a stage to recite *Fisherman and Golden Fish*, by the Russian poet Pushkin. By degrees I began to write poetry of my own. One unforgettable effort went: "The sun has a smile on its face; Old buffalo eat grass; When the street lamp is bright, it is time for me and mother to go home."

My family was not well off, but some of our best times, such as our Sunday picnics on the soft lawn of the Yuquan Botanical Garden, cost us nothing. My father told me about nature, and asked me questions to sharpen my observations. Once, on a summer's evening walk, he asked me what was flying over the lake. "Birds," I said, after a quick glance. "Wrong," said my father. Birds never flew at that hour of the evening; they were bats. From then on I began to cultivate the habit of observing closely the details of everything I saw — an important habit for a writer.

I was fond of reading short stories and fairy tales, even at an age when I could not understand everything in them. I would become so absorbed in a story that a sad scene could move me to tears. I also began to express in words my deepest thoughts and feelings, and always put my whole heart into school compositions. Unexpectedly, a fifth-grade composition of mine was published in Shanghai's *Children's Literature*. Besides kindly encouragement, the magazine's editors offered me advice on writing technique, thus becoming my first literary teachers.

During the "cultural revolution" school was suspended, and I used this time to read Russian and Soviet classics such as Tolstoy's *Resurrection* and Sholokhov's *And Quiet Flows the Don*. These made me long to go out into the world, to experience all its joys and sorrows, to struggle against its hardships, as these great writers had.

In the early summer of 1969, I volunteered to go to work at the Great Northern Wilderness Farm in northeast China. I was 19. In my shoulder bag I carried Fadeyev's novel *The Young Guard*. At the railway platform I found many young people saying tearful farewells to their family. I felt exactly the opposite, happy to be on my way and eager to meet whatever awaited me.

At the farm, I made notes of what I read, kept a diary, and tried my hand at some short stories. Sometimes I mailed stories or poems to a magazine. Mostly they were rejected. At night I read and wrote for hours, by candlelight when the electricity failed. During the summer rains our dormitory roof leaked, so I rigged a canopy over my bed with a plastic sheet to keep my books and papers dry.

I did my full share of physical labor during the day, but I also tried to use the day's experiences in ways that were useful to my writing. Assigned to guard the experimental wheat field from predators, I learned by heart lines of Tang poetry. One winter we were sent deep into the mountains to cut brush, and there I heard forestry workers singing to synchronize their movements as they loaded a truck. On my day off, I hitched a ride on a truck back to the mountains and stood two hours in the cold to record every word of the foresters' song.

During my eight years in the countryside, I worked as a farm laborer and bricklayer, grew vegetables and did scientific research, and acted as farm reporter and librarian. Later I was sent to farm headquarters to work in the publicity and education department. I grew to know the peasants intimately, and the life of the countryside — rich materials for someone who wishes to write about life.

In June of 1976 I was sent to study at Heilongjiang Arts School, where I majored in playwriting. This period of systematic study of literary techniques was very valuable to me after eight years of working on my own. After graduation, I was assigned to the provincial Writers' Union in Harbin, Heilongjiang province. I was given an office to work in, and shared with other writers the chance to visit factories, communes and other cities every year to keep in touch with the lives of a broad range of people. In 1980 I was invited to join the Union of Chinese Writers.

What about my writing? Late in 1979 I finished *The Right To Love*, a short story about a family of intellectuals who suffered
greatly during the “cultural revolution” simply because of their love for music. The years after the fall of the gang of four greatly affected my intellectual development, and this story was one of the results. During the years of turmoil, people had lost many things, including the right to engage in intellectual or cultural pursuits. Some very basic values had been called into question—love of life and of people, devotion to one’s profession. As a writer, I felt I had to help heal these wounds, to help people regain their confidence in the future. This was a turning point in my development as a writer.

Altogether since 1972, I have published one long and two medium-length novels, about a dozen short stories and three dozen other pieces—about 600,000 Chinese characters in all. In 1981 I won second prize in a national short story contest. I have tried in these works to raise questions about human life from many angles. Looking back, I am not really satisfied with my themes or my artistic style, but these are the fruits of ten years of work. I am sure I will do better in the future.

Writing is the most important thing in my life. The pen is a powerful weapon, and I want to use it to describe the struggles of the younger generation to seek truth and find the significance of human life, to praise the good and criticize the bad aspects of society. Soon I will return to my native Hangzhou to write two novels set in the area. One will be about the young people during the “cultural revolution”. Writing is my way of serving my country and its people, and this is what I plan to do.

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**Children**

**Luo Conglin Saves a Train**

On the morning of June 24 this year, Luo Conglin was as usual walking to school along the Xiangyang-Chongqing railway. Conglin is a fourth grader at the Wangjia commune school in the Daba Mountain region in Sichuan province. It was raining that morning, and as he followed a bend in the roadbed through the mountains, he spotted something lying across the tracks. Hurrying forward, he saw it was a big boulder, apparently washed down by the rain.

Some 500 meters ahead was a long tunnel. Behind lay the bend. Whichever direction a train came from, the driver would not see the boulder in time to prevent a collision which might derail the train. Conglin tried to shift the boulder out of the way, but no matter how hard he pushed it refused to budge. He looked around for assistance, but no one was out in the rain. He thought of getting help from his school, two kilometers away.

Just then a train’s whistle sounded in the distance. Running around the bend Conglin saw a heavily loaded freight train approaching at full speed. He rushed toward it, shouting for it to stop. His hat blew away, he stumbled and fell. Getting to his feet, he raced forward again. The train’s whistle shrieked.

Suddenly, Conglin had an idea. As he ran, he snatched off his Young Pioneer’s red scarf and waved it in the air. The train was only 50 meters away now, and coming up fast. Conglin had to jump off the track, but he continued to shout and wave his scarf. The engine driver finally caught sight of the red “signal”.

He threw on the brakes, and when the train ground to a halt it was only 10 meters away from the boulder.

The driver and the chief conductor jumped from the train and hugged the breathless, rain-soaked boy.

Later, to commend Luo Conglin for his bravery and public-spiritiveness the school held a grand meeting, at which he was cited as a “Model Young Pioneer”.

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**NOVEMBER 1981**
THE strengthening of Sino-Indian relations as a result of the recent visit to India of Huang Hua, Chinese vice-premier and minister of foreign affairs, is only the latest incident in a very long history of friendship between the two countries.

Having visited India three times in the past 30 years, each time traveling to many parts of the country and talking to people from all walks of life, I can testify to the great warmth and friendship the people of India feel for the Chinese people. My trips to India have been especially meaningful because as a scholar of oriental languages and culture I am strongly aware of the historical ties which bind two of the world's most ancient civilizations.

Trade and cultural exchange between our two countries undoubtedly dates from before the period of recorded history. Archaeological excavations have unearthed pottery of typical Chinese design at Indian sites, and of Indian design at Chinese sites. A number of ancient myths and legends, among them “rabbit in the moon” and the story of Fu Xi and his sister-wife Nu Wa, are common to both cultures. Finally, ancient astronomical records in both countries are so similar as to suggest an exchange of knowledge at a very early date.

The introduction of Buddhism from India to China had a lasting influence on Chinese society, art, politics and philosophy. For many centuries, Buddhism was a major religion in China, and even today...
it has its adherents. Buddhist ideas helped shape the Confucian school of idealist philosophy as it developed in the Song dynasty (A.D. 960-1279). Disputes between Buddhists and other religious adherents, and even between different schools of Buddhism, seriously affected Tang dynasty (A.D. 618-907) politics. The Tang empress Wu Zetian, the only woman in Chinese history to reign in her own right, used Buddhist scriptures to bolster her own position. In form and content, ancient Chinese art owes much to Indian sources. Among China's most treasured monuments are the Buddhist murals and sculptures in the Yungang, Longmen, Dunhuang and Maijishan grottoes. In literature, many old stories and tales, and the great epic Pilgrimage to the West, bear witness to Indian influence.

As early as the Tang dynasty, Indian medical science and astronomy were introduced into China. China's great early inventions such as silk, paper, gunpowder, the compass and printing reached India at different times. During the centuries when Buddhism flourished in China, Chinese monks traveled to India to study, and their records of the country and its people provide valuable insights into Indian culture of that period. A period of increased trade and political relations began in the Song dynasty and lasted up until the 19th century, when Western imperialists occupied Indian and reduced China to a semi-colonial state.

Although the interference of Western powers seriously diminished the contacts and cultural exchanges between China and India, the experience of the two countries under colonialism forged common bonds and mutual understanding. The peoples of both countries fought against their oppressors. In the mid-19th century large-scale revolts in India against British rule forced the British to divert troops originally intended for China to their India colony. The corrupt Qing govern-

ment called in British troops to suppress the Taiping Rebellion, the largest peasant uprising in China's history. A number of Indian soldiers were forced to join the British mercenary troops sent to China. But, as their diaries and the records of their actions reveal, this experience only increased their sympathy for the Chinese people.

In the late 19th century, a number of progressive Indian intellectuals visited China, including philosopher Vivekananda and writer Rabindranath Tagore. Tagore's writing strongly influenced Chinese writers and this, in addition to his deep feelings for China, have made him one of the best known Indians of the modern period in China.

During the hard years of China's struggle against Japanese aggression, the people of India sent medical supplies and a medical team to China. Dr. Dwarkanath Kotnis gave so much of his time and energy that he fell ill of overwork. At the age of 32 he gave his life for the sake of the Chinese people, something which will live forever in our memories.

In the late 1940s, both China and India won their independence, and a new era of mutual exchange and cooperation began. In 1954 the Five Principles of Peaceful Coexistence were formulated under the sponsorship of Premier Zhou Enlai of China and Prime Minister Jawaharlal Nehru of India. State visits by leaders of both countries promoted close consultation and agreement on world affairs. Cultural, educational and scientific exchanges flourished. As everyone knows, a boundary question with complicated historic antecedents seriously damaged the relationship between our two countries for a period of years. In the historical view, however, this must be considered a small and temporary rift which cannot permanently affect the course of friendly relations.

Although our two countries have different social systems, as Asian powers, and as developing countries with huge populations, we have many common problems and concerns. The strengthening of Sino-Indian friendship is important not only because it will benefit both countries, but because both countries have a deep interest in preserving world peace. The people of China and of India understand the importance of this friendship, and are determined to protect and develop it to the best of their ability.
Offshore Oil Exploration:

Joint Ventures Produce Results

WEN TIANSHEN and CHEN ZHONGYONG

GeoIogists have for many years predicted the existence of rich oil and gas deposits in China's offshore areas. The tapping of these resources would be a great boon to China's plans for modernization. A shortage of technical personnel and financial resources makes it almost impossible at present for China to do all the necessary exploration and extraction on her own. However, current laws on joint ventures with foreign investors make it possible to utilize foreign technology while maintaining the basic principles of independence and self-reliance.

Agreements covering the first stage of exploration, which is now in progress, were signed with 48 oil companies from 13 countries, including the United States, Britain, France, Italy and Japan. The results of this stage show great promise for the future. A test well drilled last May in the northeast section of the Beibu Gulf in the South China Sea, a joint project of the Petroleum Company of China and Compagnie Francaise des Pétroles, is already producing 640 tons of crude and 1,290,000 cubic meters of gas daily. Experts say the well have two oil-bearing formations, both rich in oil and gas reserves.

Another well in the Bohai Sea along the north coast, drilled in co-operation with a Japanese company, now has a daily output of 1,000 tons (about 7,000 barrels) of crude. Unlike much of the oil from China's land-based oil fields, the oil from these two wells is of very high quality, with a low light specific gravity and low sulphur content — similar to the high-grade light oil found in Saudi Arabian fields.

The exploratory stage

Chinese geological and petroleum departments began to search for oil and natural gas in the Bohai Sea as early as the 1960s. By the 1970s they had completed 130,000 kilometers of seismic survey lines and nearly 100 test wells, striking oil-bearing gas in 13 structures and faults. Today three offshore rigs produce oil from these sites. At the same time, of 17 test wells sunk in the Beibu Gulf, at Yinggehai and on the estuary of the Pearl River in the South China Sea, eight have produced oil of...
Burning off excess oil to prevent water pollution.  

A drilling team at a Beibu Gulf site in the South China Sea.

Chinese and French workers collect samples for the survey of oil and gas deposits.
A Chinese-Japanese crew check out some prospecting equipment.

Chinese and Japanese technicians test the quality of the oil from a new well.

One of the fleet of Chinese helicopters which regularly ferries supplies and equipment to Bohai Sea oil rigs.
industrial quality. The work done in these years provided basic data on China's offshore oil resources and laid the foundation for eventual extraction.

In the past year or so, under joint venture contracts, 14 survey ships from foreign oil companies have completed seismic surveys over 410,000 square kilometers of the South China Sea and the southern part of the Yellow Sea. The collected data prove the existence of extensive areas of sedimentary rocks and turned up 170 promising structures with a total area of 12,000 sq. km.

The first stage of exploration, the geophysical survey, has thus now been completed. The second stage, that of large-scale drilling, is about to begin. Toward the end of this year or the beginning of next, China will accept bids from foreign companies interested in joint offshore oil prospecting. If oil of commercial value is found, the benefits will be shared between the partners according to the provisions of China's joint venture laws. The Chinese People's Insurance Company is prepared to insure both partners in areas such as the life and safety of workers, materials and equipment, and the fulfillment of contracts. It will work closely with the Ministry of Petroleum Industry and with foreign companies so as to provide the maximum possible protection for offshore oil investments.

Support Structures

An operations center set up in 1974 at Zhanjiang in southern Guangdong province now directs all of the prospecting and extraction underway in the South China Sea. A computer center established here early in 1981 is equipped with highly sophisticated technology — its main unit can perform 1,000,000 calculations per second. In addition to processing seismic data, it can be used in the designing of platform rigs and in meteorological research.

The Zhanjiang base now has an airfield for helicopters and special wharves capable of berthing several oil tankers at a time. Buildings for scientific research, design, communications, technical training and other services are going up one after another. The technical force is being augmented with top-notch engineers, geologists and accountants from other Chinese oil fields. The South China Sea Oil Company branch office here already has a composite work force of more than 8,000 oil prospecting and extraction workers.

Maoming, in the Zhanjiang area, is becoming a booming oil town. Its oil refinery has been expanded, and last year was equipped with an up-to-date hydrocracking installation imported from Japan. The refinery's 80 new petroleum products are now marketed in several provinces in south China; some are exported.

One of the most important benefits of joint exploration and extraction of offshore oil is the upgrading of China's petroleum technology. Experts from foreign companies are cooperating closely with their Chinese colleagues, exchanging views and experiences with them, and passing on technical know-how. Preparations are being made to send Chinese technicians abroad for training and to set up a technical school in Zhanjiang where foreign experts will be invited to teach specialized subjects.

Cooperation between China and other countries in offshore oil extraction has just begun. But the prospects are bright, both for discovering new oil and gas fields and for upgrading China's oil-extraction technology. Said a top figure of the Ministry of Petroleum Industry: "China hopes to broaden her cooperation with friendly countries in petroleum research and technology, in line with the principle of equality and mutual benefit."

NOVEMBER 1981
The article "Summing Up: Mao Zedong, the Cultural Revolution and 32 Years of the New China" in the October China Reconstructs indicated that Chinese people from all walks of life are studying and discussing the Party document entitled "Resolution on Certain Questions in the History of our Party since the Founding of the People's Republic." The article below reflects one man's reaction to the document, and his recollections of the Party's achievements and mistakes in dealing with the patriotic national capitalists. Sun Xiaocun, by profession an economist specializing in agriculture, played an active role in many of the events he describes. Formerly president of Beijing Agricultural University, he is today a member of the Standing Committee of the Chinese People's Political Consultative Conference and a Vice-Chairman of the China Democratic National Construction Association (whose membership includes many former capitalists).

I n the 1930s, as an intellectual searching for a way to save my country and my people at a time of great crisis, I joined a progressive group called the League of Social Scientists. For the next five decades I worked either under the influence or the direct leadership of the Chinese Communist Party. I was personally involved in many of the important questions that faced our new China during the years after liberation, and worked with Party members at all levels. One thing I have learned from my experience: without the Chinese Communist Party there would be no new China, and only the Party can save China.

Last May, as the representative of several democratic parties, I attended a forum at which the Party Central Committee asked those who attended to give their opinions and comments on a draft of the document on the history of the Party, the "cultural revolution" and the role of Mao Zedong. I found the document very impressive, both in its draft form and in the final published text, for its spirit of seeking truth from facts. I particularly appreciate its objectivity in evaluating the late Chairman Mao Zedong and the role played by Mao Zedong Thought as the Party's guiding ideology at different historical periods of the Chinese revolution. The document points out that Chairman Mao made a number of serious mistakes, particularly in his later years, but concludes that his contributions over many years far outweigh his mistakes. This seems to me a very fair evaluation, in accordance with the facts as I know them from my own experience.

The Problem of Transition

When the People's Republic was born in 1949, it inherited from the old society a very poor and backward economy. The few modern industries occupied only a tiny portion of the entire national economy, but they provided a base on which to build. The Party, led by its chairman Mao Zedong, faced the double problem of developing a strong national economy and of transforming the capitalist industries which existed into socialist industries. The policies developed by the Party in those
early years involved step-by-step changes based on the realities of Chinese conditions. These policies enabled us not only to build a strong economic base, but to enlist the support and participation of national capitalists in developing socialist industries.

The formulation of these policies was taking place even before liberation. I was in Shanghai between 1946 and 1949, and saw for myself the condition of the national capitalists—that is, those progressive capitalists who were not mere tools of foreign powers or of the Kuomintang. Their very existence was threatened under Kuomintang rule, not only from high inflation and corrupt practices, but from foreign domination of many parts of the economy. Some of them, giving up hope of any reform under the Kuomintang, had begun to support the Communist cause. On the other hand, many were afraid that if the Communists came to power their property would be seized and they themselves persecuted.

At that time the Party was doing everything it could to reassure Shanghai’s industrial and commercial circles that its policy was not outright seizure of the national capitalists’ property. Rather, its immediate goals were to develop production so as to build up the economy, to give consideration to both public and private interests, and thus to benefit both labor and the patriotic capitalists. The transition to state ownership would be gradual, and capitalists would be reimbursed. Convinced of the Party’s sincerity, many capitalists who had planned to transfer their assets abroad changed their minds. Some who had already made such a move even had funds and equipment brought back.

In 1949, on the eve of the founding of the new China, representatives of industrial and commercial capitalists attended both preparatory meetings and the first official meeting of the new National People’s Political Consultative Conference and a citywide conference including representatives from all sectors of society. One day a banker told me that he no longer had any worries about the Communists coming to power. He had heard that Chen Shutong, the respected trustee of a Shanghai publishing house, the biggest in China, had been elected a vice-chairman of the National People’s Political Consultative Conference.

Government policy during the 1950s was to utilize capitalist-owned industry as part of the growing economic base while gradually restricting and transforming its capitalist nature. Some of the transitional steps were the processing of goods by private enterprises on commission for the state, state control of all purchasing and marketing, and joint state-private enterprises. Complete state control, when it finally came, was negotiated peacefully and on the basis of reimbursement for property taken over by the state. Capitalists came to accept the transformation willingly, partly because their property rights were respected, and partly because they were made to feel they still had a useful contribution to make to the development of China’s national economy.

Let us look at some stages of this transition in Shanghai. In the early 1950s Chen Yun, then a vice-premier and chairman of the State Commission of Finance and Economics, invited Shanghai’s leading textile mill owners to discuss a system of “processing on commission.” The government would supply raw cotton to the mills to be processed into cotton yarn. It would also undertake to pay the workers’ wages, admin-

Rong Yiren (second left), once a leading Shanghai textile magnate and now vice-chairman of the Chinese People’s Political Consultative Conference, at a meeting of the Association of Commerce and Industry.

Xinhua
ed the payment period from seven to ten years. In 1956, when the system was officially announced, Shanghai capitalists held a big public celebration complete with drums and gongs.

This peaceful transition from private ownership to essential control of enterprises was a considerable achievement for the seven-year-old People’s Republic—a development without precedent in the worldwide socialist movement. While it was taking place, production was actually rising, prices were stable, and there was neither panic purchasing nor large-scale export of capital by private owners.

This remarkable feat was due to a careful application of the principles of Mao Zedong Thought—Marxism-Leninism applied to China’s concrete conditions. In scientifically analyzing China’s bourgeoisie, the Party made a clear distinction between the patriotic national capitalists and the comprador and bureaucratic capitalists who had been the tools of foreign powers or of the Kuomintang under the old regime. The national capitalists could be part of a national united front, their skills and energy harnessed to socialist reconstruction. Private ownership was gradually restricted in a way that not only did not disrupt production, but also enlisted the full cooperation of the owners. Finally, the political ideas of the capitalists were reformed through a process of sensitive education that took into account their real patriotic desire to build a strong national economy. One mark of the success of this process is that after the system of joint state-private enterprise came into effect in 1956, most of the national capitalists took jobs as salaried employees—some, for instance, staying on as managers of the factories they once owned.

Mistakes Occur

By September 1966 the ten-year period during which payments were made to national capitalists ended, as had been agreed. But 1966 also saw the beginning of the "cultural revolution," a time when many old Party and state policies were discarded. The former capitalists were attacked as enemies of the people’s state. Their bank accounts were frozen. Most could not collect their full salaries—only small sums as living expenses. Some suffered from Red Guard seizures of their private property. But most former capitalists still retained a strong sense of patriotism and confidence in the Party. They looked back to the correct policies of the 1950s and early 1960s, and trusted that things would change.

In recent years, of course, things have changed greatly. The former capitalists have been rehabilitated, their back salaries repaid, their property returned or replaced. The money frozen in bank accounts was returned. When the government turned over this large sum to the former capitalists, it made three requests—don’t spoil your children; don’t disrupt the state economy; and don’t let this interfere with your personal ideological reform. What the Shanghai capitalists did with the money reveals both their patriotism and their faith in Party and state leadership. They pooled their funds and established the Patriotic Construction Company to build much-needed factories and housing for the city. Those whose age and health still permit them to work retain their old jobs or else act as consultants.

The sixty-year history of the Chinese Communist Party demonstrates clearly the importance of the principles of seeking truth from facts and applying Marxism-Leninism to the realities of Chinese life. Chairman Mao and the Party he led made mistakes when they deviated from these principles. But the spirit of these principles is fully alive in the recent Party resolution, and in the many changes that have taken place in the past few years. There is no doubt that Mao Zedong Thought will continue to guide and inspire the Chinese people as they build a modern, socialist society.
ERIAL sowing and spreading of chemicals have played an important part in the development of China's agriculture, forestry and animal husbandry. In the thirty years since 1951 such work under the Civil Aviation Administration has helped eliminate insect pests over 33 million hectares and afforested about 12 million ha., a third of which are already standing timber.

Most outstanding is air corps No. 17. Since its formation twenty years ago it has flown 13,000 hours and planted 3.3 million ha. of trees in the vast areas of the south west provinces of Yunnan, Guizhou and Sichuan. In March of last year the corps was assigned to broadcast tree seeds in the Wangcang area of Sichuan province—a mountainous landscape with variations in height of as much as a thousand meters. The No. 17's air crew first made a study of the area. At an altitude of only 50 meters, they would dive from the top of a mountain to its foot, then climb straight up from the valley to a peak, making notes of wind direction and speed. When they sowed they were thus able to broadcast 23 tons of tree seeds evenly over the 6,200 ha. without retracing their route or overlooking any area. This won the praises of the local government and people and a citation from the CAAC.

Vs. Disaster and Pests

The dry, hot winds of Henan province in the central plains of north China can bring disaster to the wheat, but it can be saved by applications of growth stimulant. Last year 23 farm planes sprayed monopotassium phosphate and petroleum growth-stimulant over 130,000 ha., boosting the province's yield 8.2 percent, or 39,000 tons. Last April, 40 planes sprayed farm chemicals over 330,000 ha. for another bumper harvest.

Since one plane can spray 27 ha. per flight and finish 94 ha. a day, it accomplishes the equivalent of 900 man-days by ground-application methods. The cost per hectare is 10.5 to 12 yuan, but the increase in income comes to nine times that.

Using aircraft to eliminate insect pests has long proved effective, but in the past aircraft generally sprayed a diluted solution or "dusted." Now they spray an extremely small amount of undiluted chemical from a higher.
altitude. The new method is 90 percent effective, especially against locusts and army worms. From 1956 to 1969 planes helped eliminate locusts from 6.7 million ha. in Hebei, Henan, Anhui and Shandong provinces and Xinjiang, bringing the locust problem under control.

For the last two years planes have also been used to spray plant hormone and foliage dressing. Last year over 70 planes sprayed wheat, rice, maize, kailiang and soybean crops in Henan and in Heilongjiang, Jilin and Liaoning provinces in northeast China.

Afforestation and Grass

Since the first seeds were broadcast in the four counties in Sichuan province, a 100,000-ha. pine forest with 10 million cubic meters of timber has grown up. One plane can broadcast 2,000 ha. a day, equivalent to the work of 2,000 to 3,000 man-days. Cost per hectare is only 15 to 45 yuan, including seeds — much lower than the cost of sowing by hand. Ever since the new forest was nursed and thinned in 1971, it has produced 30,000 cubic meters of small timber yearly for an income of 1.5 million yuan.

Both in places like the Dabie Mountain area 1,600 meters above sea level on the border of Anhui and Henan provinces or in the sand dunes of northern Shaanxi, tree and grass seeds broadcast by plane are also playing an important role in preventing erosion.

After two years of experimenting with seeding forage grass by plane, part of the sown area has shown economic gain. Last year survival rate of 42 percent was achieved on 270,000 ha. in Inner Mongolia and Xinjiang, in Hunan and other provinces. Now scientific research has made large-scale sowing of forage grass possible on many types of terrain in north and south China. This will speed up the regeneration of pastures and help develop animal husbandry.

China is a main rice-producing country, but most areas still sow seeds and transplant shoots by hand; only a few areas use machines. In the past two years, however, some state farms have begun aerial sowing of paddy field. The seeds are scattered evenly and because the seedlings are not tightly packed as in seedbeds, they get more sunlight when young and then yield better. Last year, for instance, in state reclamation farm No. 2 in Xiaoshan county, Zhejiang province, over 330 ha. of aerial-sown paddy yielded 4.5 tons per hectare — double the usual crop yield in the locality. In Guangdong province it used to take 300 persons a month to sow Nanwanhu Farm's 1,670 ha. of paddy by machine. Now two planes can finish the sowing in 30 hours, greatly reducing the amount of seeds and expense.

Afforestation flights take corps 17 fliers into the minority areas of the southwest. Photos by Chen Changfen

A Tour Guide's Tale

XIA ZHIGAN

One aspect of the better life for the Chinese people today is increased travel within China. Of course, those who had time off — mainly teachers and students — always used to visit relatives and friends in distant places and see the sights. But now hostels and other facilities are being extended, and travel agencies set up to handle organized tours. One of these is the Shanghai Youth Travel Service under the auspices of the Shanghai Committee of the Communist Youth League. Its aim is to help young people broaden their horizons and appreciate the culture of their country.

— Ed.

FOR the past two years I have spent summer and winter vacations from my job as a Shanghai middle school teacher of Chinese guiding tourists for the Shanghai Youth Travel Service.

I am delighted to do so, for it gives me a chance to see places about which I knew a great deal from teaching about them all my life, but had never seen. Now I can teach about them so much more vividly. Also, it was good to get out among the secluded mountains and waters after 41 years of drinking city water strongly flavored with chlorine, breathing city air and being bombarded by its noise, with only the potted roses and cypresses on my balcony to refresh me.

I have led three groups to beautiful Mt. Lushan in Jiangxi.

CHINA RECONSTRUCTS
Xia Zhigan, the author.

province where the summer temperature among the waterfalls and green hills is around 20 degrees Centigrade and white clouds float everywhere—even into your room. Sometimes, all of a sudden, Lushan is completely obscured in the clouds and the mists that rise from the valleys. Then, in a few minutes, the clouds fly away and the magnificent wooded peaks show themselves again. Even the most skilled photographers find the scene changes too fast for them to catch some of the views.

I have led groups on Mt. Huangshan in Anhui province famed for its “four uniques”—strange-shaped rocks, pines pushing out of them, a sea of clouds, and hot springs. To get to the top of Tiandu (Capital of Heaven), highest of the three peaks, all above 1,800 meters that top the mountain, one must cross the “carp’s back”—a big rock near the top five meters long and only half a meter wide. One must concentrate all one’s attention and not look down into the chasm. For hundreds of years those who have reached the summit of Tiandu have exaggerated its dan-

ger and advised elderly people not to make the crossing. But I encourage my tourists to as long as they are physically able. An old woman of 70 in my tour reached the summit with her daughter-in-law and grandson. She was very proud of it afterward and grateful for my help and encouragement.

Last year I led five groups to Yaoling Paradise, a big karst cave full of grotesque stalactites and stalagmites located 90 kilometers from Hangzhou on the coast south of Shanghai, and have visited many other caves in nearby Zhejiang province. Double-Dragon Cave, a well-known one in Jinhua county, Zhejiang province, is one cave inside another, with a spring at the center. An old saying about this place runs, “Lie in a boat to find the source of the spring,” and indeed, to reach the second, one must go by cable-drawn boat through a passage only 0.4 meters high and a dozen meters long. I always have to warn my tourists to keep their hands away from the cable.

Our ancestors left us a magnificent heritage in culture and art. I always feel very proud when taking tourists to see examples of it. Once I led 30 young Chinese workers to visit the Zijin (Purple and Gold) Temple built in the Tang dynasty (618-907) on East Hill near Suzhou. In it are 16 vividly-carved clay Buddhist figures said to be made by the famous sculptor Lei Chao and his wife during the Southern Song dynasty (1127-1279). Their garments, executed in great detail, fall in natural folds evoking a strong sense of texture. The canopies above them, though made of clay, have ribbons that seem to flutter in the wind.

There we met a group of foreign tourists. Some could hardly believe that such fine artistic work was made of clay. But one of them was allowed to climb up to inspect, and then he believed it.

Not all such places of historic interest, however, passed unscathed through the ten years of turmoil of the “cultural revolution”. I am gratified that the government is now spending considerable sums to restore them.

I sometimes make paintings of what I have seen to keep the memory fresh and for the enjoyment of neighbors who drop in to see them. I also spend my Sundays and other spare time exploring nearby places to seek out more interesting spots and find out from the local people more about their place.

Every time I come home, my little granddaughter searches my bag for souvenirs or goodies I have brought her. Once she found some stones I had picked up and laughed at me that I should carry back so many useless rocks. They were not useless to me. I planned to use them to make potted landscapes recreating the scenes I had visited.

Xia Zhigan, an amateur painter captured this scene of the Fuchun River during a tour there. Photos by Zhu Yungfeng
New Finds About the Great Wall

IN CHINESE the Great Wall is known as the Ten-Thousand-Li (5,000-kilometer) Wall. In fact, ten times that length, or more than 50,000 km. of such defense works, were built in China's history. Different sections of them were connected up to form what we know today as the Great Wall. This is one of the new facts being discovered in recent wall studies using historical documents and ancient remains.

The 5 to 10 meter-high, 5 to 8 meter-wide structure — one of the seven wonders of the world — runs from Shanhaiguan (Between the Mountains and the Sea) Pass on the coast of Bohai Gulf westward to Gansu province, passing through three other provinces (Shaanxi, Shanxi and Hebei) and the Inner Mongolian Autonomous Region. The latter contains about 15,000 km. of it, according to the recent count, and Hebei 5,000 kilometers.

The part most people visit is Badaling, about 70 km. north of Beijing. Coiling across north China's green mountain ranges like a majestic dragon, it is a typical section of the wall. Climbing stone steps at Badaling onto this ancient defense system, one sees ramparts on the inner side and battlements facing outward. At measured distances or strategic points are fortress-like watchtowers where the soldiers and guards lived. There are also strategically placed beacon towers used to give the alarm if enemies approached.

The Great Wall is the heritage of all mankind, and study and protection of it is an important task.

Research in recent years led to new discoveries.

Built by Many Dynasties

Parts of the wall were already being built in the seventh century B.C. The states of Yan and Zhao north of the Huanghe (Yellow) River, and others began to build walls in their own domains to prevent invasions by nomadic tribes from the north. After the Qin dynasty emperor Qin Shi Huang unified China in 221 B.C., he linked these sections and extended them to form the Great Wall. In the following millennium, many repairs and additions were made. The Northern Qi dynasty, whose capital was in Hebei province, in A.D. 555 conscripted 1.8 million laborers for reconstruction and repair of a 500-kilometer strip between today's Beijing and Datong in Shanxi province. The Ming dynasty (1368-1644) saw large-scale reconstruction.

Twenty states and dynasties contributed to the wall, three of the dynasties constructing over 5,000 km.: Qin (221-206 B.C.) 5,000 km.; Han (206 B.C.-A.D. 220) 10,000 kilometers and Ming, 6,350 kilometers.

Finds at Shalingkou

Jinshanling (also known locally as Shalingkou) is 130 km. north of Beijing in Luanping county east of the highway from the capital to the former imperial summer resort at Chengde. In June and July of 1980, a team investigating the Great Wall found a forgotten section of several dozen kilometers at this site. The terrain is strategically situated with access difficult. The defense works are still solid and the section has been

LUO ZHEWEN

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Countless tourists have seen the Great Wall at Badaling north of Beijing.
Best-preserved Ming section recently investigated at Jinshanling, north of Beijing.

Wang Hongxin

Cloud Terrace, once used for Ming sacrificial rites, at Juyongguan Pass on the way to Badaling.

Wang Hongxin

Fantastic 14th-century carving decorates the
This watchtower also housed guards.

Wang Hongyan

Cloud Terrace.

Photo by Li Fen and Huo Jianying
First Pass Under Heaven, the gate at Shanhaiguan near the sea.

Out where the wall ends: Westernmost Jiayuguan Pass in Gansu province.
preserved intact. Though with its own special features, this section is similar to the one at Badaling and could become another ideal spot for visiting the Great Wall.

After moving their capital from Nanjing to Beijing in 1421, the Ming emperors still feared attack from remnant Mongol nobles from the north. Though the Yanshan Mountains protected Beijing on the northwest, east of them a 600-kilometer section was needed from Badaling to Shanhaiguan. It was built with great care and was exceptionally strong. Gates were placed at several hundred strategic passes, the best known of which used to be Juyongguan, Gubeikou, and Shanhaiguan. Jinshangling was one of them.

The view from the top of Jinshangling is majestic. The wall, with its many blockhouses and watchtowers, winds along mountain ridges. In the distance is the blue Miyun reservoir and Mount Wuling, the highest of the Yanshan mountains.

Ming was the last dynasty to use the wall as a defense. The Qing dynasty which came after did not rely on fortifications to keep nomadic peoples out but, following a conciliatory policy, included them in its rule. Emperor Kang Xi (r. 1662-1722) decided that no more construction or repair could be done on the wall. Though construction stopped, Jinshangling remained an important gateway through which the emperors went to their summer resort every year.

**New Archeological Finds**

Many ancient relics have been uncovered. For example, in Wei-chang county in Hebei, archaeologists found a section of the wall built in the Qin dynasty. Here, a number of quan (the sliding weights of a steelyard) dating from that time were found. Made of iron in 221 B.C., the heaviest weighs several dozen kilograms and carries emperor Qin Shi Huang's edict giving the reason and necessity for standardizing weights and measures. The site is 1,200 kilometers from Xianyang, the Qin capital near Xian in Shaanxi province, indicating the close attention paid to defense as well as to economic development in far areas. Arrowheads and weapons of the Warring States Period (475-221 B.C.) and the Qin and Han dynasties were also discovered.

In ancient times, military information, political and economic documents were transmitted along the wall. Many valuable inscribed bamboo and wooden slips from the Han dynasty have been excavated in and near the watchtowers. At Juyan near the Ejin Banner in Inner Mongolia, more than 21,000 such slips were found. At Yumenguan and Jiayuguan in Gansu province many slips of documents and imperial edicts were uncovered. These are highly important for studying ancient military, political and economic conditions.

Recently stone tablets on the construction of the Great Wall were unearthed. These describe its building methods. Some years ago a stone slab with the inscription, "The 19th year of the Jiajing reign" (1540) was dug out of the tamped earth of the wall north of Jiayuguan. On one side was the date of the construction and on the other the name of its supervisor. The job was done section by section under a contract system. In Guyuan in the Ningxia Hui Autonomous Region brick excavated records the repair of the wall in 1451 by a workforce of 15,000 men in half a year. The brick also recorded the discovery of another older inscribed brick describing how an earthquake on June 18, 1219 had collapsed the wall and how it had been rebuilt by 20,000 soldiers and peasants. This was new evidence in the history of earthquakes.

**Progress in Research**

Field work on the wall supplement the study of documents and other ancient data. Such studies also help research in other branches of learning. For example, new information on the wall is assisting Prof. Shi Nianhai, vice-president of Shaanxi Teachers' College, in his studies of erosion along the Huanghe River—the wall serves as a marker from which to determine how far the edge of pastures and farmlands have moved in north China. Few sections were built in the desert or far from the Huanghe River. After many centuries, however, some parts are now buried in sand, or lie far from the river due to changes in the latter's course. This allows Prof. Shi to estimate the rate of shifting sand and locate the changed river courses.

Part of the Great Wall lies over a seismic fault. Earthquakes here left displacement evidence important in earthquake studies.

Ground and air surveys of the Great Wall are now going on. In three to five years scientists should be able to determine construction dates of its various parts, its total length in each dynasty and its location and state of preservation in every province and autonomous region.
THE arrival of the Central Red Army in the northwest China revolutionary base at the successful conclusion of the Long March marked a favorable change internally for all China. But externally the country was the victim of spreading Japanese aggression. After the seizure of the northeastern provinces in 1931 had come the capitulatory truce signed in 1935 by Chiang Kai-shek’s pro-Japanese war minister, He Yingqin, which compromised and endangered China’s sovereignty in much of her north, including Beiping (as Beijing was then known) and Tianjin. On December 9th, 1935, a great patriotic movement of Beiping’s students broke out in protest against appeasement and surrender. It spread rapidly to Shanghai, Nanjing, Wuhan and other cities, in all of which the people demanded an end to civil war and united resistance to Japan.

In their new location, the Communist Party and the Red Army were able to strengthen and guide the countrywide movement. “Comrade Mao Zedong,” said Sister Deng, “thought the Party should adapt to the new situation, and fight for the national resistance for which the masses were rising in struggle. At an enlarged meeting in Wayaobao, Shaanxi province, in December 1935, the Party’s Central Committee decided to form a united front with the Kuomintang and all patriots within and outside it.”

The Famous Xian Incident

Chiang Kai-shek, on his part, was still stubbornly pushing civil war. He transferred troops headed by the “Young Marshal” Zhang Xueliang whose homes were in the Japanese-seized northeastern provinces, to the far-off northwest, ordering them to “annihilate the Red Army in a combined action” with troops led by the local Kuomintang general Yang Hucheng. In this senseless campaign they were quickly defeated, with many of their officers and men taken prisoner by the Red Army. “I did work among these prisoners,” recalled Sister Deng. “We told them Chinese must not fight Chinese but must fight together against the national enemy. We adhered strictly to Red Army’s constant policy toward those captured: not to kill, beat or curse them; to give all who wanted to go home traveling expenses to get there; give treatment to the sick and wounded; and welcome into our own ranks those who wanted to join the Red Army. Thus the Communist Party’s call for a national united front reached the hearts of not only students in the Kuomintang areas, but of the left wing of the Kuomintang headed by Soong Ching Ling and He Xiangning, of patriotic and democratic personages such as Shen Junru and Zou Taofen and of the Kuomintang’s troops. What soon followed was a dramatic split in that Party’s forces. Generals Zhang and Yang were the first to accept the Communist Party’s proposals for unity—presented to them in a secret meeting with Comrade Zhou Enlai.”

On December 12, 1936, Chiang Kai-shek came to spur them into renewed civil war. But these two generals, spurred instead by the people demonstrating in the Shaanxi provincial capital of Xian, took Chiang prisoner in that city. They demanded an end to civil war and cooperation with the Communist Party against Japan. “We in Yanan ran out of our loess caves to sing and dance when we heard that Chiang was captured,” said Sister Deng. That scoundrel had killed millions—Communists, patriots, progressives and commanders and soldiers of Red Army. Now, we thought, we’ll have his head. But something far different happened. Within three days Zhou Enlai was sent to Xian, to talk peace to Chiang, not get him killed. But then many comrades both in the army and Party did not quite understand its significance.

Later we knew that the far-sighted decision was Mao Zedong’s. Zhou Enlai was sent because he had known Chiang well in the united front of 1924-27. By this act our Communist Party proved again that it was concerned not just for itself but for the country and the people. Without a peaceful solution to the Xian Incident the pro-Japanese He Yingqin would have launched an even bigger civil war. Only Japan would have benefited. That’s why we suppressed our hatred for Chiang, negotiated with him, and released him when he expressed agreement on the main points. He was treacherous: We knew that. Yet, it was then that the second united front with the KMT was set up.

True, the Party had been outmaneuvered and suffered heavily...
in the first united front (1924-27). “But”, Sister Deng said, “by 1936 we had more experience, clearer principles, better methods. The three treasures of China’s modern revolution are the Communist Party, the army it leads, and the united front. (This has always been true, and still is, in relation to Taiwan.)

“In fact, at the time of the Xian Incident, the Japanese invaders wanted us to kill Chiang. And He Yingqin prepared to bomb Xian, and kill both Chiang and us Communists. But some KMT people were more enlightened.”

A united front must have a common aim, Sister Deng went on. “Our first one with Sun Yat-sen’s Kuomintang was against the imperialists and warlords. The second was formed to combine all forces against the common enemy — the Japanese invaders — and for democracy for the Chinese people. In the first united front, our mistake was to give up the army and relinquish leadership through successive concessions. We thought wrongly that the revolution was a bourgeois-democratic one, the bourgeoisie should lead. Now we knew that only the Communist Party and its policies could lead China’s revolution. So our policy was independence within the united front: If our partner was progressing we would cooperate, if there was backsliding we would resist it. We learned to combine unity with struggle, and to wage struggles that would be beneficial to the common cause, be seen by the people as justified, and be within the limits required by the cause.”

This was done throughout the anti-Japanese war. In 1941, when the Kuomintang attacked and tried to wipe out the Communist-led New Fourth Army, said Sister Deng, their attempt was resisted and frustrated — but even then the Party stuck to the united front against Japan.

**Edgar Snow and Beiping Interlude**

In discussing this period, Sister Deng mentioned with particular warmth the American journalist Edgar Snow, who toured the northwestern revolutionary base just before the Xian events. “He was the first foreign reporter from the outside to come to our area. Through him the people of the world, and our own Chinese people who lived under Kuomintang rule, came to know what our Communist Party and Red Army were, and what we were fighting for. Edgar Snow loved China. He was one of our best friends. We shall remember him always.”

Sister Deng’s TB, she recalled, at about this time took a turn for the worse. Since medical conditions in the northwest base were primitive, the American doctor George Hatem (Ma Haide) who had come with Snow, advised her just to rest in the sun for a few hours each day — after a month of which her temperature fell to normal.

Following the incident at Xian, the Party wanted her to seek treatment in Beiping, and then, when that proved impracticable, in the Western Hills outside Beiping. When she got there, the doctors marveled. Her lungs had practically healed. “What medicines cured you?” they asked. “Optimism and nature,” she answered.

When Japan launched all-out war against China there on July 7, 1937, Sister Deng was still in Beiping. To find ways for herself and other comrades out of the now enemy-occupied city she revealed her presence to Snow. “He had last seen me in an army-like uniform. Now I turned up wearing a close-fitting Chinese dress and dark glasses, and introduced myself as Mrs. Li. ‘See who I am?’ I laughed, removing the glasses. Snow accompanied us on the train to Tianjin.”

Sister Deng observed that it was there that she got to know Israel Epstein. On Snow’s introduction, she and Zhang Xiaomei, a comrade formerly working in Beiping, left Japanese-held Tianjin with Epstein on a coastwise British ship. From Yantai in Shandong province, where her group disembarked, they made their way back to Xian.

**In the Anti-Japanese War**

In 1940, the war’s third year, Sister Deng was transferred to work in the office of the Communist-led Eighth Route Army (the former Chinese Red Army) in the Kuomintang government’s wartime center, Chongqing. The office was headed by Zhou Enlai, Dong Biwu and Ye Jianying.

“Though there was a united front, the Kuomintang never gave

Zhou Enlai welcomed back to Yanan by Mao Zedong and others after the historic negotiations in Xian which established a new KMT-Communist united front.
up its idea of destroying our Party and army," said Sister Deng. "It proved active in civil war, passive against Japan. In 1941 Chiang's troops attacked our New Fourth Army, and we in Chongqing were prepared for arrest. We were watched and could move very little outside our building. Then in 1943 the Communist International dissolved itself, which was a positive move suited to the new needs of revolutionary struggle in many countries. The Kuomintang hoped, thus, that we would dissolve our Party too. Zhou Enlai made use of their illusions to say we needed to go back for a Central Committee meeting, and we returned to Yanan in August."

War's End and Chongqing Talks

Sister Deng was still in Yanan when Japan surrendered unconditionally in August 1945. "The eight-year war with Japan was over. Before that there had been the ten-year civil war, and before that, constant strife between warlord armies. You can imagine how the Chinese people craved peace! They welcomed the victory over Japan with joy, fireworks, gongs and celebrations in all areas, both the Kuomintang's and ours."

But Chiang Kai-shek was preparing new campaigns against the liberated areas. The Communist Party had issued statements, on August 16 and 25, expressing its support of the people's desire for peace and making six proposals to end civil war. Chiang countered by inviting Chairman Mao to Chongqing for talks. This was a mere maneuver on his part. If the talks took place, Chiang thought, he could gain time to rearrange his forces for a new attack, and if Comrade Mao didn't come, the Communist Party could be blamed for refusing to negotiate. "He thought Comrade Mao wouldn't dare come," said Sister Deng. "How could Chiang be expected to understand us Communists or realize that, when the people craved peace, we too would struggle for it at whatever risk?"

"We in Yanan also worried about Comrade Mao's safety. But he insisted on going, and after discussion the Central Committee decided to send him with Comrades Zhou Enlai, Wang Ruofei and others on the same plane, provided by the U.S. ambassador Hurley who flew with them. The Chongqing talks lasted from August 28 to October 10, 1945, when an agreement was signed. And Chairman Mao returned safely to our great relief."

The Communist Party's key demands in the negotiations were: 1. The Party would keep its armed forces; 2. Peace and national reconstruction; 3. On the basis of peace, democracy, solidarity and unity, to build a coalition government; 4. To abolish the old National Assembly called by the Kuomintang, and reelect one with representatives of all political groups; 5. Our Shaanxi-Gansu-Ningxia border region must retain its democratic government. Chiang did not agree to all this; he wanted our armies and liberated areas to be handed over to the Kuomintang.

On December 20, 1945, General George C. Marshall came to China as special representative of President Truman of the United States, ostensibly to mediate and help make peace. And Chiang Kai-shek, in his own post of keeping to the October 10 Agreement, had to carry out one of its stipulations, the holding of a People's Consultative Conference. The session on January 10, 1946 was attended by the Communist Party's delegation headed by Zhou Enlai and including Wang Ruofei, Ye Jianying, Wu Yuzhang, Qin Bangxian, Lu Dingyi and Deng Yingchao (Sister Deng herself). On that same day the Kuomintang had to sign an agreement for a truce between the armed forces of the two parties. Its observance was to be supervised by a "Committee of Three" (the KMT government, Communist Party and the USA). But Chiang, signing the truce with one hand, waged civil war with the other. And the U.S., while "mediating," helped transport his troops to attack liberated areas in northeast, north and central-south China. But the Party knew all about the plot and called on all its members to be prepared against possible emergencies.

In November 1946 Chiang's clique violated all its own agreements and called a bogus "National Assembly" of its own making. Zhou Enlai, representing the Communist Party in Nanjing, declared to a press conference of Chinese and foreign journalists that the Communists would boycott this body as divisive, dictatorial, and a violation of signed agreements and the people's will.

Fighting and United Front

"With the Kuomintang's waging unrestrained civil war," Sister Deng said, "our slogan became, 'Overthrow Chiang Kai-shek and liberate all China.' But even three years later, when we were close to victory on the entire mainland, Chiang tried to save his position by pretending to retire as President (in favor of Li Zongren) and to negotiate again. We agreed to talk about a peaceful, cooperative solution. Zhang Zhizhong, Shao Lizi, Huang Shaohong and Liu Fei (prominent generals and officials—Ed.) came as the KMT's delegates to liberated Beijing. But the KMT never acceded to the peace agreement worked out with its own emissaries. That is why our army had to force the Changjiang (Yangtze) River and take the KMT's capital, Nanjing. At the same time we persuaded those delegates to stay and cooperate with us, which they did. So, while fighting when we had to, we were still building a united front.

"Our united front work did not stop when Chiang fled to Taiwan. Whatever scope of unity is needed at a particular stage of the revolution, we try to achieve—with anyone, external or internal, with whomever there is common ground. So when the Kuomintang on Taiwan says our united front is just a trick to undermine them on their island, they're talking nonsense. History proves that we Communists don't play with the fate of the nation. We are sincere. The patriotic united front we strive for today is broader even than the one against Japan."
The Party’s actions, not just its words, Sister Deng stressed, determine whether people will cooperate with it or not. She recalled some of the united front work done in Kuomintang areas in 1938. “When our representatives arrived in Wuhan, people were ignorant of what we stood for — because of Chiang’s news blockade and false propaganda. Some believed we Communists were green-faced, red-eyed, long-toothed monsters who owned everything, even wives, in common, and killed and burned. But when they actually met us they saw that we weren’t arrogant or corrupt, that we spoke to the point, sought common ground and didn’t mouth empty words. We made use of all opportunities to do united front work.” Sister Deng recalled how joint work for the welfare of war orphans was undertaken not only with Kuomintang democrats but with Soong Mei-ling (Chiang’s wife), and how one such effort was set up after a meeting held for the famous U.S. journalist Anna Louise Strong in a Young Women’s Christian Association hall.

“How you behave is what really counts,” Sister Deng reiterated.

The Party in Power

Then Sister Deng shifted to the present. “Now we’ve been in nationwide power for 32 years,” she said. “We’ve gone through several phases, positive and negative. During the first 17 years of our People’s Republic what we did was mainly correct; there were errors but they didn’t go on for long. For example, the over-extension of the anti-Rightist movement, and exaggerations in the Big Leap Forward — both in the late 1950’s — were corrected by the Party itself.

“The ‘cultural revolution’ was the worst and costliest mistake and the most protracted; it lasted for ten years. It was initiated by Comrade Mao Zedong, who had become confused on the various social contradictions within the country, and the line between contradictions among the people and those with the enemy. Experience has shown, however, that there was no basis in China for this kind of action. And the Lin Biao and Jiang Qing-counter-revolutionary cliques were enabled to misuse the ‘cultural revolution’ and turn it into an incalculable catastrophe for the country and people. That is why we now put the words, ‘cultural revolution’ between quotes.

“We are drawing the lessons of that tragedy, so that it will not recur. During those years, Israel Epstein was one of the foreign friends who was persecuted. Now our Party has summed up the experience of those years so as to not repeat such errors.”

Of Chairman Mao Zedong, Sister Deng said, “We old revolutionaries who followed him over the decades, who knew him well and were nurtured by his ideas, have a deep feeling for him. And all Chinese people over the age of fifty, I think, recall what they owe to him with love and gratitude. Comrade Deng Xiaoping said to the Italian Journalist Oriana Fallaci in an appraisal with which we all agree, that Comrade Mao Zedong’s merits were primary and mistakes — of which the ‘cultural revolution’ was the grossest — were secondary. If he made errors earlier, we cannot blame him alone, for our leadership was collective at the time, and we others on the Central Committee share the responsibility. Despite the errors, we revolutionaries of the older generation will not tolerate hostility to Chairman Mao, nor will China’s workers and peasants.”

Now, after the overthrow of the gang of four, said Sister Deng, the Party is giving substance to many features of Mao Zedong Thought. The correct principles he laid down for democratic centralism in the Party, distorted under the gang of four, are being restored. In economic development the same is true concerning the priority of agriculture, light industry and heavy industry, in that order. In agriculture, for diversification. In socialist morality, for learning from Lei Feng. And, in relation to leading personnel, for struggling against special privilege. All these efforts are being made in the light of current reality.

The Party Alone Can Lead

“The history of hundreds years since the Taiping peasant revolution in the mid-19th century has proved that only the Communist
Party could lead the people to overthrow the ‘three great mountains’ weighing on them (imperialism, feudalism and bureaucrat-capitalism),” said Sister Deng. Only the Communist Party was able to establish a new-democratic state and lead the people in building socialism. Without the Communist Party there would be no new China. And the person who found how to apply Marxism-Leninism to the Chinese revolution was Mao Zedong. After his immortal contributions to the building of the people’s armed forces and the revolutionary bases and the founding of the People’s Republic of China, he made others to the building of socialism.

Later, as a result mainly of the “cultural revolution”, said Sister Deng, the Party’s prestige suffered. “But we are firm in our beliefs, and strong in organization. Among Party members there are still 600 from the 1924-25 days, 24,000 from the second revolutionary civil war of 1927-37, more than 68,000 from the anti-Japanese war of 1937-45, and 2.3 million from the war of liberation that culminated in the founding of our People’s Republic in 1949. They are tempered in the struggle in which, under the direct circumstances, the people came to choose our Party above all others. Also we have some 15 million members who joined between 1949 and 1965, prior to the ‘cultural revolution’. All this is a vast fund of experience.

“Now the task is the four modernizations. It is to implement Marxism-Leninism and Mao Zedong Thought, the application of Marxism-Leninism to China, in the proper way. It is also to build in stability and unity. It is to develop agriculture and industry on sound lines.

“As long as we have life in us, we must go on fighting for the people.” With these words, Sister Deng, this calm, smiling woman revolutionary who has fought within the Party throughout its 60-year history and who today is deeply engaged in restoring and extending its best traditions, ended our more than five-hour interview.

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Reforms in the Academy of Sciences

LI XUN

THE PRESIDENT and five vice-presidents of the Chinese Academy of Sciences were elected last May for the first time in the institution’s history. Another reform is that the Science Council, which had previously functioned only in an advisory capacity — really as an honorary group — will now be the Academy’s highest decision-making body. The Council now consists of 400 members — augmented by 283 — nominated from the Academy’s various institutes and other scientific institutions and universities. It elects a 29-member presidium, and it is this presidium which elected the new president and vice-presidents. Chosen as president was Lu Jiaxi, an outstanding physical chemist born into a family from Taiwan, he formerly headed the Academy’s Fujian Institute of Research on the Structure of Matter. The term of office for the president and vice-presidents is two years, after which they may be re-elected for another two.

The Science Council is divided into five sub-councils to exercise leadership over the different fields. Each council elected its own standing committee and chairmen. The latter are: Qian Sanqiang, Physics and Mathematics Council; Yan Dongsheng, Chemistry; Feng Depei, Biology; Yu Guangzhi, Earth Sciences; and I myself am chairman of the Council for the Technical Sciences.

This year’s session of the Science Council was its fourth since it was set up in 1955. Twenty-one years had passed since the third session was held. Scientific work, like all other, suffered great losses as a result of the ultra-Left political errors. The Science Council
was forced to stop work. But now more and more people are coming to realize that in order to build China into a modern socialist country science and technology must play their full role. In 1979, we began to work for restoration and reorganization of the Science Council. Thus it was enlarged so that its membership more than doubled. Among the youngest of the new members is Yang Le, 42, a fellow at the Mathematics Research Institute. Previously, the only woman member was Lin Qiaozi, the famous gynaecologist. Now there are 14 women, or four percent of the total.

A NEW constitution for the Science Council stipulates that it is the highest decision-making body for the Academy. It is envisaged as a permanent body which will give appraisals, suggestions and guidance from the point of view of science about China's numerous projects for construction and scientific research, and serve to collect the views of scientists and channel them to the proper places. Internally, it will coordinate scientific research and the distribution of manpower, finances and material resources of the Academy's 117 research setups. Its function outside the academy is to study results and problems in China and also analyze and study new achievements and directions in science abroad so as to come up with fresh ideas and topics. Its tasks are also to strengthen unity and cooperation among the different branches of learning and increase international exchange. The presidium is the decision-making body when the Science Council is not in session.

The change, intended to bring the scientists themselves into leadership over science, reflects a change in their status and is designed to give their enthusiasm full play. It is an effort to end the situation in which scientists' views were not respected in economic construction, state affairs and even in scientific research itself, and to overcome a style of work where some things were consequently handled without a scientific attitude or regard to objective laws.

The orientation for China's science today is: Stress the basic, stress raising the level and serve the national economy and defence. Experience over the past thirty some years shows that in a country backward in science and technology such as China's, for the country's basic construction it is important to engage in basic research, and through basic research and work in the course of it, to train a body of scientists of a comparatively high theoretical level and build a solid theoretical base in all branches of science. This orientation is necessary both to help China solve problems in science and to reach out into new fields. Of course the Academy must also engage in some urgently-needed applied research and development projects.

The crux of the work of the Chinese Academy of Sciences, therefore, lies in the way the five councils exercise leadership over the institutes under them, and whether the work of the institutes can proceed and advance normally.

RECENTLY I went back to the Shenyang branch of the Institute of Metallurgical Research. I helped to set it up in the 1950s. At that time, full of enthusiasm to build a socialist country, we did our best to make it into something which, with regard to China's science, would draw a beautiful picture on blank paper, as Chairman Mao had said. Our work has made a contribution to the development of China's metallurgical industry.

With the changes in the Academy, the principles and tasks have been defined. Naturally a good many contradictions and problems have arisen in the course of the readjustment, so the reform will have to be effected gradually. But it has already produced results and is certain to have a far-reaching effect.
A moonlit garden, a nightingale, the passionate vows of young lovers — it is the familiar balcony scene from Shakespeare’s Romeo and Juliet. The first unusual thing about this performance is that the lines are spoken in the Tibetan language. The second amazing thing is the background of the performers. Only five years ago, these young people from the Tibetan countryside knew nothing of drama, much less of Shakespeare. But now, about to graduate from the Shanghai Theatrical Institute’s special Tibetan branch, they had chosen as their senior play a work that is a real challenge for any student group. The debut triumphantly justified the students’ choice, drawing not only popular applause, but also the enthusiastic acclaim of seasoned Shanghai professionals and English-speaking observers.

The transformation of thirty young people, mostly the children of serfs, into polished theatrical performers was a hard but exhilarating process for the students and their teachers alike. The process began back in September 1976, when Xu Qiping, an experienced teacher at the Shanghai Theatrical Institute, traveled to Tibet to choose 30 young people as the third group of Tibetans to enter the school.

The 30 finally accepted — from the Lhasa, Xigaze, Shannan and Nyingchi areas — at first sight might not have looked like promising theatrical material. Years of physical labor from their early youth had left many with heavy, deliberate movements and pronounced stoops. Their educational level was low, and many understood neither Han Chinese nor the standard Tibetan dialect. Duobuji, who eventually played Romeo, was a semi-literate miner not yet 20. The future Juliet, Deyang, was then a 14-year-old middle-school student. Nima, the production’s Nurse, was then under 20 and working on a farm.

When asked today for the secret of their success, the students say that they owe it all to Xu Qiping and their other teachers. Xu Qiping, who has trained many stage actors in his 25-year teaching career, claims that the students’ achievements are due solely to their own hard work. Clearly, the teachers were conscientious and caring, and the students eager to learn.

When the 30 young Tibetans entered the institute in April 1977, they found a special curriculum prepared for them. For the first year, primary emphasis was placed on learning the Han language, using materials specially prepared by the staff, and perfecting their pronunciation of standard Tibetan. By the end of the first year, students had learned 1,500 to 2,000 characters, and could basically speak, read and write the Han language. For the next three years, students took specialized courses in posture and stage movements, gymnastics, fencing, singing, dance, recitation, and dialogue.

LU ZHENJIA

LU ZHENJIA is a staff member of the Nationalities’ Cultural Department of the Ministry of Culture.
Juliet confides in her nurse.
Romeo and Juliet meet for the first time at the Capulets' party.

Torn between hope and fear for the future,

The balcony scene. Photos by Zhang Shuncheng

Friar Laurence marries the lovers.
To broaden their knowledge and increase their ability to analyze and use theatrical techniques, the students saw a large number of plays and films. Teachers gave the students individual music lessons, even using their spare time and holidays for this purpose.

The students’ primary task, of course, was learning to perform on stage. The teachers helped students acquire control over the pace and rhythm of their movements, to create particular gestures that would bring out the essential nature of whatever character they were playing. Students were asked to observe human and animal behavior, to write essays on what they had learned, and to perform exercises in which they conveyed inner feelings or states of mind through outward actions.

One of the most important tasks in training the students, Xu Qiping has said, is “to open the windows of their souls.” Teachers tried hard to help students really understand what they were being taught, instead of blindly imitating their teachers. Encouraged to think for themselves, the students gradually expanded their imaginative powers and developed a sound, independent artistic judgment.

In their four years at the institute, the Tibetan students performed at least a dozen full-length Chinese and foreign plays, including The Unmarried Couple. And then, the five months of rehearsal for Romeo and Juliet, and the successful debut.

Huang Zuolin, the famous Chinese stage director, found the performance “full of youthful vitality.” “Excellent!” said an official of the British Royal Shakespeare Company; he urged the young troupe to bring the play to London, where it was sure to be warmly received. Other foreign literary critics were equally enthusiastic. Perhaps the most impressive compliments came from members of the Shanghai People’s Art Theater, who agreed that “Each of the roles is played better than we have ever done them.”

All of his colleagues who saw the production congratulated Xu Qiping for his excellent choice of students — for being able to see a potential Romeo in a clumsy young miner, or an outstanding Nurse in a farm worker. But the teacher would not accept the credit, pointing instead to the fine qualities of the students — their intelligence, their hard work, their ability to learn quickly. He would talk about Duobuji (Romeo), who, conscious of his own physical and vocal handicaps, worked tirelessly to overcome them. Assigned physical exercises, he did them again and again in his spare time. He was out of bed each morning earlier than any of his classmates to practice the standard Lhasa pronunciation instead of his own Xigaze dialect. And on Xu Qiping would go, talking about his students — while they talked about him.
Report from Anhui

Team Leader on New Contract System

DENG SHULIN

The Chen family is eating more meat and eggs these days.

FORTY - SEVEN - YEAR - OLD Chen Qixing heads a household of nine and is also leader of the Shangzhuan production team, Huayuan production brigade, Lang commune, Chuxian county. Although our conversation covered a wide range of topics, Chen returned again and again to the new “responsibility system” — under which individual households contract to produce certain quotas on assigned sections of land, with the right to keep everything over the quota. (See “Greater Responsibility on the Farm” in the October 1981 China Reconstructs.) Local people are obviously delighted with the results.

The Team Leader’s Job

“You asked me what a production team leader does under the new system,” Chen said. “First let me tell you how it was before. Just assigning daily chores and getting team members to go out to the fields and do the work was a big headache. Every night I would have to figure out what had to be done next day and which team member would do what; otherwise workdays were a mess. Each morning we used to sound a bell to call members to the field. Sometimes nobody would show up even after the bell was rung twice.”

“You don’t have to use the bell any more, do you?” I asked.

“No. Now each household works out its own tasks and hours of work, and I don’t have to keep after them. But in some ways I am busier than ever, and can concentrate more on real leadership tasks.”

Chen went on to tell me some of the things he does. At the beginning of the year, he is responsible for working out the terms for each household contract. He has to keep track of overall team production of grains, cotton, oils, pigs, eggs and poultry, and when necessary encourage households to fulfill their contracted quota. Part of his job is explaining government policies and rules to team members, and reporting their suggestions and demands to higher levels of government.

A large part of his responsibilities involve the collective welfare of the team. Besides helping to determine rational allocations of water and buffalo, Chen leads team members in learning and applying scientific farming techniques. He works out team assignments for collective undertakings such as farmland capital construction, water conservation projects and sideline industries; the tasks vary according to the farming season. He takes a leading role in educating families about hygiene and birth control. When families have difficulties completing their farm work because of illness or other causes, he finds ways of helping them. Finally, he is frequently called upon to mediate family and neighborhood disputes.

 Asked to describe what disputes arose among team members, Chen gave two examples. A member recently came with a complaint that another member wanted to divert water through his paddy field, which would have washed away the fertilizer he’d just applied. Another time, a member asked permission to cut down the production team’s trees on the ridges surrounding the paddy fields contracted to him because they got in the way of his work. In each case, Chen had to find a solution that was fair to each member and the production team as a whole.

The production team pays the team leader 100 to 150 yuan a year in salary for his services. The money comes out of the sums each household turns in to the collect-
tive each summer and autumn harvest season according to the amount of land they have contracted for.

New Prosperity

A number of households have, through their own hard work under the new system, raised their income considerably. Chen Qixing's own family is one of these. With a labor force of five, the Chen family has in four years raised its gross income as follows:

1978—1,331
1979—1,877
1980—2,371
1981—6,222 (projected)

Chen outlined for me the current sources of family income. They are contracted to work 3.4 hectares of land. Last winter they grew one hectare of wheat and almost two hectares of rape, selling 1,233 kilograms of rapeseed and 1,750 kg of wheat to the state for an income of 2,048 yuan. They have 2.8 hectares planted to rice this summer. Because local water conservation projects built in the last 30 years insure stable yields despite any drought or excessive rain, the Chens are confident of raising 9,000 kilos of rice to sell to the state after reserving seeds for planting and family consumption. Other crops and domestic sidelines will bring the total yearly income to the projected sum of over 6,000 yuan, an increase of 117 percent over last year.

Annual per capita income for the family of nine should reach 700 yuan, as against 319 yuan in 1980. This is considered relatively high for a Chinese working family, and particularly for a peasant family. The average monthly income of a state employee is now approximately 62 yuan. If a couple both work, family income would be double that, or 1,488 yuan per year. If they have one child, family per capita income would be 496 yuan — less than in Chen's family. Since it costs more to live in the city, and peasant families grow much of their own food, the standard of living of the Chen family and other families like them now actually exceeds that of many urban workers.

A Better Life

With the increase in income, the Chen family's life has improved in many ways. Chen's ancestors came from Henan province; his grandfather left there during the chaotic war years, and after wandering for some time settled in the place where the Chens now live. In his grandfather's and father's day, not a single one of the thirty village households had houses of brick. Two houses thatched with mountain grass were considered the best in the village because most people lived in more vulnerable straw-thatched houses. Now brick houses are being erected all over the village.

The nine-member Chen family now has two houses, one thatched-roofed, the other adobe (which is cheaper but less enduring than brick), but still need more room. Let Chen himself tell you about their building plans: "We've put aside 2,000 yuan from our total income to build a three-room brick house with a porch and tiled roof. This is something my grandfather and father dreamed of all their lives but never realized. The foundation is already laid, but the busy farming season interrupted construction. Right after the autumn harvest, we'll finish the job."

One day I was admiring the Chen's flock of geese, and commented that they were sure to bring a lot of money on the market. Chen proudly told me that the geese would not be for sale, but for the family dinner table. In the past, peasants raised chickens, ducks and geese mainly for eggs which they could exchange for salt and matches at the store. They rarely ate meat or eggs. With more cash, they no longer have to barter, and they also have more meat and eggs in their diet.

When the Chen family and other peasants go to work, they invariably wear old, patched clothes. But I noticed that their clothes for after work and for holidays are much newer and more fashionable.

(Continued on p. 55)

Owned by the production team, this buffalo is shared among the Chen family and three others.
Taiwan Pilot Crosses Over

ZENG SHUZHI and WEI XIUTANG

HUANG ZHICHENG, 29, former major in the Kuomintang air force who on August 8 flew his F-5f fighter plane over from Taiwan and landed at a People's Liberation Army air base in Fujian province, was accorded a rousing welcome on August 17 when he reached the Beijing railway station, with klieg lights blazing and cameras whirring. The applauding crowd included representatives of the PLA air force and several other former Kuomintang pilots who had "crossed over" to the mainland, among them Huang Youshou, Xu Tingze, Tang Shiyue, Yan Lei and Zhu Jingrong, all now commanders in the PLA air force. "I have a lot to learn from you," Huang said as he shook hands with them. He said he was deeply moved to be realiz-
ing a long-held desire to come to the mainland.

On the two-and-a-half day nonstop express train trip from Fuzhou in Fujian he had been delighted to be seeing things he had read about as a child in school in Taiwan where he was born and grew up: the scenery of mountains and rivers, the famous bridge over the Qiantang estuary at Hangzhou, where his father had once attended an air force officers' academy at Jianqiao airfield. As his train crossed the Changjiang (Yangtze) and Huanghe (Yellow) rivers, thrilled at seeing these two rivers which had nurtured China's civilization he recalled the words of a folk song "Heirs of the Dragon" he had learned in Taiwan: "In ancient China there's a river called the Changjiang, a river called the Huanghe..."

"I passed through seven provinces and municipalities on my way to Beijing," he said later, using the name by which Beijing is still known in Taiwan, "and everywhere saw simple, honest people busy at their work. This has been an eye-opener for me and made me realize how great my motherland is."

He stood beneath the great gate of Tian An Men, of which he had always heard. He also visited the Great Wall. The night before, quite excited, he hummed to himself the melody of a song
popular in the 1930s after the Japanese invaded China's northeastern provinces: "Great Wall, Oh Great Wall! In my native place beyond you the sorghum thrives and fragrant are the soybeans..." He said, "When I read about the Great Wall in school, I dreamed of climbing it one day. Today I realize the significance of the saying: To be a good Chinese one must visit the wall. I hope the people on Taiwan will be able to come here some day."

He also climbed to the top of Coal Hill in the center of Beijing and looked out over the yellow tile roofs of the ancient imperial palace glistening in the sunlight, and beyond, rows of new high-rise apartments. What he saw contradicted what he had been led to believe in Taiwan: that all cultural relics and historical sites on the mainland had been destroyed. That the only high-rise buildings were a few for show in front of Tian An Men, that there was no freedom of choice in marriage and that all books of literature had been burned. But the many young couples in the parks convinced him that young people were choosing their partners for love, and during a visit to a bookstore he saw readers avidly examining many works of Chinese and foreign literature despite a summer heat wave (he did miss the air-conditioning).

MORE than once Huang remarked at the warmth of his reception. When he landed in Fuzhou a crowd of people with picks and spades came running toward him. "I feared they were militiamen and Red Guards with guns and clubs," he said later. They were actually members of a construction crew. A moment later an officer rushed over to the plane on a motorbike. "I have come back to the mainland," Huang said. The crowd responded with smiles and handshakes. "They surrounded me, but to welcome me, not to capture me," he recalled. Later in Fuzhou he met Commander Yang Chengwu who invited him for dinner and took him to a ball game.

He was surrounded again when he visited the Ming Tombs outside Beijing. A group of other visitors recognized him and got out of their minibus to shake hands with him.

His travels had made him realize for the first time the great difference between the two social systems, he told a rally in Beijing on August 19 at which his appointment as deputy commandant of an air academy was announced, "...and I feel that the path I have chosen is the correct one." To a press conference of Chinese and foreign journalists he observed, "Conditions in our country are still hard but I have full confidence in her future. Our country has great potential."

HUANG has received letters and cables from more than 20 provinces and cities praising him for his patriotic action and his contribution to the peaceful reunification of China. Many were from young people. One cable from Guangxi, where his family comes from, read: "Your relatives and everyone else in your home town are extremely happy and proud about your crossing over to the mainland to take part in the country's modernization effort. We hope you will study hard and contribute to building up a powerful People's Air Force."

On many occasions he expressed his resolve to contribute all his talents to his country and his people, including to Premier Zhao Ziyang, who received him.

"Only last night I learned that I am No. 90," he joked to Air Force Commandant Zhang Tingfa, referring to the fact that 89 other airmen have crossed over with their planes in the past 30-some years, and added, "The people of Taiwan are happy over the recent reforms on the mainland because these will enable our country to become strong and prosperous as quickly as possible."

And to us, who interviewed him for China Reconstructs, he had a special message: "Tell all who are concerned for me that I am doing very well over here."

Huang Zhicheng in the uniform of a major in the Kuomintang air force.

Xinhua

Huang Zhicheng at a press conference for Chinese and foreign correspondents at the Great Hall of the People.
The Adventure of the American Pilot

ZHONG ZI

I first heard the story of the American pilot over 30 years ago, on a star-filled summer night toward the end of the War of Resistance Against Japan. I was stationed in the Lo Fu mountains, Guangdong province, the headquarters of the East River Guerrilla base area. My friend Old He and I sat in front of the old abandoned temple which then housed the base’s newspaper the Forward for which he was a correspondent. He had just returned from the front, and was full of the story of the American pilot, Lt. Donald W. Kerr.

Lt. Kerr was with the 14th U.S. Air Force group in Guilin, northwest of Hongkong, where he acted as commander and instructor of the Sino-U.S. Joint Air Corps. On February 11, 1944, he had led a fighter-plane bomber escort on a raid over Japanese-occupied Hongkong. They encountered heavy resistance, and in an aerial dog fight over Kai Tak airport, Kerr’s plane was hit. With the fuel tank on fire and burns on his face and feet, he bailed out. As his parachute drifted down, he could see enemy soldiers everywhere. It seemed only a matter of moments before he’d be captured.

But a sudden gust of wind blew him over a small hill north of the airport, into Hongkong’s New Territories area near Kowloon. He ran desperately to seek a hiding place; this was still enemy territory, and he might be noticed at any moment. Just then a young boy appeared and gestured him to follow. The boy belonged to a guerrilla band, but all Kerr knew at the time, with Japanese soldiers closing in, was that he offered some chance of escape. The boy knew every hill path, and led the American by circuitous ways to a hiding place in a valley.

Having brought me to a place of relative safety, the boy slipped away to contact the partisans. Kerr could hear enemy soldiers searching for him. Whenever they got near, he held his breath. At dusk the boy returned with a woman partisan. They brought him food and a quilt, and transferred him to a safer place.

He stayed in the new hiding place over two weeks as enemy soldiers searched each nearby village and field. Every day the boy and the woman braved enemy checkpoints to bring Kerr food and rebandage his wounds. One day the boy, though he had only fifty cents to his name, used part of the money to buy candy for the American. Kerr offered him fifty dollars, but despite the boy’s poverty he refused to take it. Kerr was so touched that he determined not to eat the candy, but to carry it with him in hopes of one day showing this tangible evidence of unselfish friendship to his American colleagues.

One pitch-dark night a group of partisans led by “Black Liu” (his guerrilla nickname) came to move Kerr to a safer place. Kerr himself never knew the whole story of that rescue; I myself learned it only many years later, when I chanced to meet Lin Zhan, a woman who had been an interpreter with the East River Guerrilla unit.

The Japanese search for the downed pilot had seriously hampered the activities of the guerrillas in the Hongkong-Kowloon area. Search parties swarmed over nearby villages and patrol boats effectively blocked the sea route. The guerrillas determined to inflict some damage on the enemy and rescue Kerr at the same time. The night of the attack, Liu and five other guerrillas disguised as fishermen maneuvered two fishing boats close to enemy patrol boats, attacked them with handgrenades and put them out of commission.

Then they sailed on to Hongkong, where they discarded their fishermen’s clothes and donned their second costume of the night—captured Japanese uniforms. Liu and four of his companions slipped into Kai Tak airport. They waited until the changing of the airport guard, when the enemy was least alert. Jumping the guards, they bound and gagged them and hid them out of sight. With the help of Chinese airport workers secretly sympathetic to the guerrillas, they poured gasoline over enemy planes all over the airport, lit long-running fuses, and got out fast.

From the hill opposite the airport, the guerrillas and airport workers watched gleefully as plane after plane exploded and burst into flame. As the flames lit up the sky, the onlookers heard a sound like thunder. Right on schedule, the explosives planted by another guerrilla band had brought down the great iron bridge at Kowloon. The guerrillas and patriotic workers took advantage of the Japanese panic and confusion to slip into the area near enemy headquarters, where they destroyed equipment, inflicted a number of casualties, and as a final gesture

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The story of Lt. Donald W. Kerr's rescue, with cartoons he drew, published in the June 11, 1944 Forward, the guerrilla base newspaper.

February from the hands of the enemy, and eventually returned to my own base. I met some of you personally to express my thanks. But I know there were many people I did not meet who helped me at the risk of their lives. I can only write this letter to all of you, old and young, to thank you for saving my life and helping me to carry on our common struggle.

"China's heroic resistance is acknowledged by the whole world. We Americans take pride in fighting side by side with you. May we stand with you forever, in peace or war."

Almost a year later, the East River Headquarters unexpectedly received a heavy parcel from the other side of the Pacific. In it were copies of an American magazine with an article by Lt. Kerr about the guerrilla forces. He talked about their bravery and resourcefulness, their patriotism, and the friendship they had shown him. He urged Americans everywhere to send the guerrillas medicine and supplies, and American forces to cooperate with them. But even before the magazine arrived, the 14th U.S. Air Force group was using Kerr's reports to train young pilots to seek help from the guerrillas if their planes crashed.

**A Day's Routine**

I visited Chuxian county during the busiest farming season, May 20 to June 20. In this short time rice seedlings have to be transplanted to fields where wheat has just been reap. Every morning before 5:00 Chen led his sons and daughters to the field to transplant seedlings. Chen's sister and oldest daughter came from their own homes to help. At 7:30 they stopped for a simple breakfast of rice porridge, fried rice and pickled vegetables. The three school-age children also had chores to do before they left for classes: the oldest fed the pig, the younger ones chickens, ducks and geese.

The adults rested for a short time after breakfast, then worked in the fields until lunchtime. This meal—which Mrs. Chen left the fields to prepare—is the main meal and more substantial than the other two. After an hour's rest, they returned again to the fields, where they stayed until 7:00 or 8:00 p.m. dinner hour. Mrs. Chen left the fields ahead of the others to water the family vegetable garden.

Despite their ten-hour workday, the whole family sat around the supper table, chatting and laughing. But the new day would start very early, and everyone was in bed by 10:00. Chen told me, "It won't be so hectic once this busy season is over. There'll also be a slack season of several months after the autumn harvest, and we'll visit the commune headquarters or county town, browse in the stores, see films and drop in on relatives."
### Improvements in Living Standards
Since the Founding of the People’s Republic

#### Food

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<td>Pork per capita</td>
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<tr>
<td>Edible vegetable oil per capita</td>
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#### Clothing

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#### Consumer Goods

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<td>1 out of every 2 households in cities</td>
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<tr>
<td>Total number of bicyclos</td>
<td>96.17 million</td>
<td>1.2 for every household in cities</td>
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<tr>
<td>Total number of television sets</td>
<td>9.02 million</td>
<td>1 out of every 6.8 households in cities</td>
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Culture and Education

Film projection units per 10,000 people in 1980:
1.27
750% increase over 1957

Number of newspapers published daily per 100 people in 1980:
4
500% increase over 1952

Newly-published books per capita in 1980:
4.67
240% increase over 1952

Percent of school-age children in school in 1980:
93%
49% in 1952

Number of middle school students per 10,000 population in 1980:
578
950% increase over 1952

Number of college students per 10,000 population in 1980:
11.6
250% increase over 1952

Scientific & technical personnel per 10,000 workers in 1980:
661
150% increase over 1952

Health Care

Hospital beds per 1,000 population in 1980:
2.02
620% increase over 1952

Infant mortality rate in 1980:
20 per 1,000
139 per 1,000 in 1954

Doctors per 1,000 population in 1980:
1.17
58% increase over 1952

Average life span in 1978:
68 years
57 years in 1957

Sketches by Zhong Jian
Early Musical Instruments Live Again

YI SHUI

When ancient peoples buried priceless works of art and the furnishings of daily life in the tombs of monarchs and nobles, their intention was to provide a luxurious afterlife for these very important people. They could not know that the tombs would become time capsules illuminating the life and work of the past for people of today. Since 1949 a great number of archaeological excavations have revealed surprising things about China's past. Some of the most interesting discoveries concern ancient music, which we now know reached a high level of sophistication at a very early date.

During the Warring States period (475-221 B.C.), one of the most important musical instruments was composed of sets of bronze chime bells suspended on wooden frames. Each bell was designed to give a different note, and musical sequences were produced by striking them in turn with small mallets or sticks. More than 20 years ago a set of 13 chime bells was recovered from a large tomb in Henan province. The bells and their lacquered wooden frame were in such perfect shape that the national radio network used them for its broadcast marking the new year.

The qing is a kind of percussion instrument made of stone. Pictures dating back to the stone age have been found showing people dressed as wild animals dancing to the beat of a hanging instrument which must be a qing. The earliest qing discovered to date, estimated to be from about 2700 B.C., was found at Dongxianfeng, Xiazian county, Shanxi province in the late 1970s. Sixty centimeters long and of chipped stone, it has a hole in the top by which it was hung. When struck, it gives off a clear and melodious sound.

A larger qing was recovered during the excavation of a tomb at the ruins of the Shang dynasty (16th-11th centuries B.C.) capital of Yin, at Anyang, Henan province. An uneven triangle carved with the design of a tiger, the qing is made of white jade with green markings. The same Yin ruins yielded a jade qing of even more elaborate design, with dragons on both sides of the instrument. The bell chimes had a seven-tone scale system similar to Western systems, but unlike most Chinese traditional music. Indeed, since the bells were found to be perfect in tone and pitch after the long centuries of disuse, they have been used to play music of all kinds—ancient and modern, Chinese and foreign.

An even more impressive 65-bell set was discovered in 1978 in the Hubei province tomb of the Marquis of Zeng, who died in 433 B.C. Sections of soprano, alto and bass bells hung in three layers were designed for multi-part harmonies, and five musicians at once were required to play it. From the instrument itself and the inscriptions on it, experts have learned much about the development of music in that period. One interesting discovery was that...
ment, and a wooden drum with skin drumheads which had unfortunately disintegrated too far to be reconstructed. In 1979, however, a late Shang dynasty bronze drum was found at a site in Chongyang county, Hubei province. The oval drum, measuring 75.5 centimeters high and weighing 42.5 kilograms, rested on a four-legged base and was decorated with bands of raised studs and a design of clouds.

The Chinese saying "to pass one's self off as a yu player" refers to an incompetent person who pretends to be competent. According to legend, King Xuan of the Qi state (in the period of the Warring States) liked the sound of the yu, a wind instrument made of reeds. He especially liked to listen to an orchestra of several hundred yu players. A certain Nanguo, who couldn't play a single note, maneuvered his way into the orchestra because a musician's pay seemed attractive. He held the instrument in the proper way, and lustily went through the motions of playing it.

This bold deception lasted until King Xuan died. His successor, King Min, liked yu playing too, but he preferred solos, and asked each musician to play for him in turn. Mr. Nanguo was forced to flee, his yu tucked under his arm, before his turn came up. Made of reeds with a gourd base, no actual samples of the yu of this period have survived, but records indicate that it was widely used from 500 B.C. on, and actually originated much earlier.

A yu dating from the Han dynasty (206 B.C.-220 A.D.) was unearthed at Mawangdui near Changsha, in the tomb of the wife of the Marquis of Yi. The bowl of this yu is made of wood — an advance over the gourd construction — in which is fixed a wooden mouthpiece with a horn rim. Projecting from the bowl are 22 bamboo pipes of different sizes with finger holes by which the musician played different notes. This yu turned out to be a replica made especially for the burial, an exact copy of a real yu except that it could not be played (there is no airway, for example, between the mouthpiece and the pipes).

Found in the same tomb, however, was a set of 12 real yu pitch pipes and a group of lifelike wooden figures of musicians which included two yu players. The pitch pipes, each labeled with the name of its pitch, have provided valuable evidence about the early Chinese tonal system.

THE sheng is a reed instrument a bit smaller than the yu, but with a bigger bowl. One of the earliest sheng recovered was found in 1978 in the tomb of that same Marquis of Zeng who was the proud owner of the 65 chime bells. Made of 18 bamboo pipes with bamboo reeds attached to a gourd, the whole instrument is 20.5 centimeters high and is painted in black lacquer with a red and yellow design.

Some sheng cast in the shape of a gourd, but made of bronze, have been found in ancient tombs of people of China's present-day minority nationalities. They are characteristically decorated with animal shapes, one of the most eye-catching featuring a lifelike bronze ox with outstretched horns. Like Orpheus of Greek legend, a legendary Chinese musician is said to have played so beautifully that even the birds and the beasts were charmed. Xiao Shi, who was supposed to have lived during the Eastern Zhou dynasty (770-256 B.C.) was an expert player of the xiao, a kind of vertical flute. His playing attracted rare birds — first the peacock, then the white crane, and finally the phoenix, which was so impressed that it swept Xiao Shi and his wife off to the palace of the heavenly immortals.

A variation of the xiao consisted of a number of such flutes tied together like panpipes, and called paixiao. The earliest examples of this instrument uncovered by archaeological investigation were found in the tomb of the music-loving Marquis of Zeng. Consisting of 13 bamboo pipes of varying length bound together with bamboo strips, the two paixiao were in such good condition that one could still be played. The two sets of pipes were adjusted to slightly different scales, with a tonal range surpassing the traditional Chinese five-tone scale.

Up to the end of the Han dynasty (B.C. 206-220 A.D.), the paixiao was one of the most important wind instruments. Its simplicity and flexibility made it indispensable both for indoor musical ensembles and for military bands on campaign. It is pictured often in Han dynasty art.

Paixiao (panpipes) made of bronze from the early Warring States period (475-221 B.C.). For centuries paixiao were a regular feature of military bands and indoor musical ensembles.

A bronze sheng unearthed in Yunnan province retains the shape of a gourd, from which these instruments were originally made.
KAIFENG:

Into the Ancient Painting

TAN MANNI

MORE than anything else, it is the mingling of city and country that makes Kaifeng different from the other five ancient capitals of China.* The feeling was vividly captured for all time in the famous 12th century scroll painting "Qing Ming Festival at the Riverside" that has made the city a place of attraction to historians and tourists.

For 160 years Kaifeng was capital of the Northern Song dynasty (960-1127). Described as "matchlessly prosperous and beautiful," it was one of the world's most flourishing cities, with a population of one million. Today Kaifeng still retains a surprising amount of the atmosphere of the ancient capital. The original layout of the medieval town can still be traced. There are the wooden-shuttered shops and streets and lanes bustling with peasant vendors and craftsmen. Way of living and the heritage of culture of that time can still be found.

However, like the other ancient capitals, Kaifeng has taken on the aspects of a modern city in some thirty years of socialist construction. The present Kaifeng covers a larger area than before — 359 square kilometers, but has a population of only 400,000. Kaifeng was the capital of Henan province from 1911 to 1954, then a consumer city with no industry at all. Since liberation in 1949 more than 500 factories have been built, producing everything from tractors, automobiles, combines and machine tools to computers and solar batteries. It has also developed lately into a light industry base of the province with a number of enterprises producing wool cloth, television sets and other consumer goods. In exploring the sites of the ancient painting, I found that on the location of the "rainbow bridge" in the painting, the tower of a chemical fertilizer plant now stands. From there a seven-kilometer highway lined with apartments for working people leads to the city proper. Behind these housing projects are factories one after another.

Half of the city's population are government employees and workers. New housing for them totals 340,000 square meters. Many of the old-style houses built around a courtyard have been preserved and renovated. The lanes which used to turn to mud on rainy days have been paved to permit auto access.

Northern Song Capital

Kaifeng's location north of the Huanghe (Yellow) River on the strategic Henan plain, the cradle of China's civilization, also made it capital of six lesser dynasties and states since it emerged as a town more than 2,000 years ago. Historically it was a place where warlords scrambled to control the central plain.

In 960 A.D. the palace guard commanded by the young General Zhao Kuangyin mutinied against the boy ruler of the Later Zhou dynasty. They then came to him at Chenqiao, 20 kilometers northeast of Kaifeng, draped him in a robe of imperial yellow and placed him on the throne. At Chenqiao Village today visitors are shown an ancient locust tree which is believed to be where Zhao tied his horse. The tree, though leaning over almost to the ground, still grows green branches.

Zhao Kuangyin, who became Song Tai Zuo, first emperor of the Song dynasty, established strong centralized rule and put an end to the fragmented rule of local governors and warlords in central and southern China. This stabilized society and promoted the economy.

He made Kaifeng his capital. During the time the nine Northern Song emperors ruled there, handicraft industry and commerce flourished. Brisker trade brought handicraft production out of the closed workshop and into shops opening on the street. It also prompted the introduction of paper currency and bills of exchange known as "convenient money" — the world's earliest. There were demonstrations of rockets propelled by a gunpowder explosion. Notable achievements were made in astronomy, calligraphy and printing. This period also saw the invention of movable type by a worker named Bi Sheng. It was to have a great influence on the dissemination of culture.

In 1127 Kaifeng was captured by troops of the Jin Kingdom, which had grown up over several centuries in the north under a former nomadic people, and the court fled South to what is present-day Hangzhou to continue as the Southern Song dynasty. In later centuries the chaos of war and flooding of the Huanghe caused Kaifeng to decline. It suffered severely in 1642 when Prince Zhou of the Ming dynasty seeking to stave off siege of the city by the army of the rebel peasant Li Zicheng, broke the dike on the Huanghe. The Prince's family, nobles and wealthy people fled by boat, but only 30,000 of the 370,000 population survived. Most of the city was covered with a layer of silt five meters deep. Only the Iron

*Xian, Luoyang, Hangzhou, Nanjing and Beijing.

TAN MANNI is a staff reporter for China Reconstruccts.
A landmark in Kaifeng, the ‘Iron’ Pagoda dates from 1049 and takes its name from the color of its tiles.

Tiles of this pagoda feature musicians and Buddhas.

Pota Pagoda, Kaifeng’s oldest, built in 977. Every brick has a Buddhist image.
Fairs are still held on the spot shown in the painting.

Dragon Pavilion, used to pay homage to Qing dynasty emperor in Beijing, built on ruins of Song and Jin palaces.

Detail from 'Qingming Festival at the Riverside' scroll, reproduced in embroidery, shows bustling life when Kaifeng was capital.
Intricate carving — even the temple bell — is a specialty of Kaifeng Qing dynasty architecture.

Though this archaic iron rhinoceros at the river was to guard against flood, the city was ruined by inundation several times.

The design of this early Yuan dynasty Yanqing Taoist Temple shows Mongol influence.
City and country meet at the night market, an ancient tradition in Kaifeng.
Pagoda and Pota Pagoda were visible.

**Historic Ruins**

The 13-story octagonal Iron Pagoda, built in 1049, gets its name from the color of its glazed bricks. It is a landmark of Kaifeng. It is a replica of a wooden pagoda previously on the site, under which were buried relics of the Buddha brought from India. It had been destroyed by lightning. The Iron Pagoda survived the Ming dynasty flood, several strong earthquakes, and shelling by Japanese troops in this century. In 1957 the local people’s government allocated funds for its renovation. It was restored to its original appearance, though its base remains buried in silt.

The oldest extant structure in Kaifeng is the Pota Pagoda, built in 977 on a terrace once belonging to the Po family in the south of the city. Only three of the original nine stories remain; atop them now stands a tiny seven-story pagoda. About this there is a story. In the 14th century during the rule of the first Ming ruler Emperor Hong Wu there was a fight in the royal family about who should succeed him. When the son of the emperor’s eldest son, who had died, became heir apparent, objections came from the other princes, including prince Zhou of Kaifeng who also put in a claim. Since many men had ascended the throne in Kaifeng, the superstitious Hong Wu felt that there was some “imperial air” in Kaifeng that enabled them to become emperors and he did not want Prince Zhou. So to curb the Kaifeng “air” he ordered the top six stories of Pota Pagoda, its highest structure, pulled down. The small pagoda on top was added in the following Qing dynasty (1644-1911). Every one of the outer layer of bricks of the original pagoda bears a Buddhist image. Though some of the figures are as small as a pumpkin seed, they are still done in such detail that even the hair and eyebrows are discernible. Here one feels the ancient painting has come to life.

The present temple was rebuilt in the 18th century. One famous point is the thousand-armed statue of Guanyin, Goddess of Mercy, carved from a single piece of the wood of the ginkgo tree.

The first temple on the site was built in 555. A Buddhist shrine known far and wide and even abroad during Tang and Song times, it contained many fine murals and magnificent halls and pavilions as well as rows of meditation rooms for the monks. So famous was it that episodes in the famous novels of later times *Pilgrimage to the West* and *Outlaws of the Marsh* are set in it. Emperors often came there to pray. Unfortunately it did not survive the Ming dynasty flood.

Some of Kaifeng’s streets still keep their ancient names, memorializing figures in history known to every Chinese. Bao Mansion Street once was the site of the home and office of the Song dynasty Magistrate Bao Zheng, so famed as an honest and upright judge that he became a character in many later operas. Yang Family Lake, one of the two in front of the Dragon Pavilion, memorializes the resistance of the Yangs, a famous family of warriors who resisted the Jin invasion. Of the many tales that have grown up around them and been adapted for the stage, a favorite is *Women Generals of the Yang Family*.

**Paintings and Bian Embroidery**

The Song dynasty is one of the most brilliant periods of Chinese painting. Famous artists from all over the country gathered in Kaifeng after an Imperial Academy of Painting was set up there. The eighth Song emperor, Hui Zong, gave painters high positions. Although his extravagance aroused the opposition of the impoverished people, he was himself an accomplished painter. His bird-and-flower works and his calligraphy are considered national treasures. It was he who demanded that artists give attention to minute detail.

In its use of detail, “Qing Ming Festival at the Riverside,” a long horizontal scroll with many scenes, is typical of the period. The artist, Zhang Zeduan, was a member of the Imperial Academy. This masterpiece, lost and recovered several times, is now kept in the Palace Museum in Beijing. A reconstruction of a Song city built in Hongkong drew on its scenes.

In keeping with Kaifeng’s cultural tradition, calligraphy, which...
in China ranks alongside painting as an art, is highly honored there today. The municipal museum has 1,500 inscribed stone tablets from different dynasties. Calligraphy is a favorite form of decoration in hotels, stores, schools and homes. Calligraphy demonstrations are often held at Xiangguo Temple and in the parks. At the spring festival, calligraphers go to the villages and write without charge the artistically-written couplets the peasants like to put around their doors at this time.

Embroidery was another art patronized by the Northern Song court. It set up an embroidery workshop with 300 people to serve the royal family. When the court fled the invasion, it took a number of embroiderers south with it. Quite a few embroiderers now living in Suzhou can trace their ancestry back to those who came from Kaifeng. Shigu (Nuns') Embroidery Lane near Xiangguo Temple was also very famous. Here nuns from the temple made and sold their work.

But by the time of liberation the art of Bian embroidery — so named for the Bian River which once existed in Kaifeng—had been lost. In 1955 the people's government called together seven women who knew the traditional skills and set them to studying and rediscovering the techniques and artistry of the ancient Bian pieces. Thus the old art was reborn and is now carried on by the 360 workers in the Kaifeng Bian Embroidery Factory. The Bian style was noted for its delicate tones and simplicity of execution. A great many of its ancient works were of the Song painting type. Using 14 different techniques, the factory has produced an embroidered copy of the Qing Ming Festival scroll. Within its 25 centimeter width and 5.25 m length it contains more than 550 figures in varying postures and with different expressions, as well as 50 animals, carts, sedan chairs, boats and houses.

One of the picturesque spots of Kaifeng is the Dragon Pavilion.

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Viewed through the mist across the two lakes fronting it, the yellow glazed tile roofs rise like a fairy palace. It rests on a 13-meter-high terrace covering the sites of the Song palace and residence of Ming Prince Zhou. A wooden pavilion was built there in the Qing dynasty for officials to pay homage to the emperor in Beijing, hence the name Dragon Pavilion. The present structure was rebuilt in 1734.

From the top of this pavilion one can see the city’s ancient outlines, including the Song imperial thoroughfare leading from the Dragon Pavilion which cuts Kaifeng into two parts and extends out into the suburbs until it meets today’s television transmission tower and the chimneys of the powerhouse and chemical fertilizer plant. The lakes in front of the pavilion are used by the people of Kaifeng for swimming and boating.

The area around the Xiangguo Temple in the heart of the city has been a traditional gathering place for merchants and travellers since the Song dynasty, and so it still is today. It is the part of the city which has retained the most Northern Song character. To the temple fairs came storytellers, acrobats, puppeteers with their marionettes and huge shadow figures, fortune-tellers and doctors of herbal medicine. Ten thousand people could congregate in the yard of the temple.

Today the lane west of it is the busiest market in Kaifeng, with vendors at one end selling clothing, hardware and other goods for daily use, and food stalls, restaurants and a cinema at the northern end. There I also noticed some elderly people listening to two blind people performing local folk ballads. In front of the temple were peasants hawking vegetables and fruits from their carts.

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**Chinese Cookery**

**Sweet-and-Sour Carp with Deep-Fried Noodles**

*(Tangcu Liyu Bei Mian)*

**THIS** famous traditional dish from Kaifeng originated in the imperial kitchen when that city was capital of the Northern Song dynasty one thousand years ago. It was often served at banquets, especially when foreign envoys were entertained by the emperors.

Huanghe (Yellow) River carp was said to be the most tender of all fish, and the hair-thin noodles symbolized its whiskers. An expert chef could roll and make a kilogram of flour into thin noodles a thousand meters long. For easier preparation, in the following recipe bean vermicelli have been substituted for noodles. The fish is eaten first and then the noodles are dipped in the gravy. There is a saying, “Eat the dragon first and then his whiskers.” In Kaifeng this dish is made quite sweet. The amount of sugar may be cut to taste.

2-lb. or 3/4-kg. carp (grass carp, silver carp or other tender fresh-water fish)

25 grams bean vermicelli

1 cup sugar (or less)

5 tablespoons vinegar

2 tablespoons rice wine (or sherry)

1 tablespoon soy sauce

1 teaspoon salt

1 tablespoon minced scallion

Oil for deep frying

1 cup stock

Cornstarch solution (1 cup water mixed with 3 tablespoons cornstarch)

Scale and clean fish, keeping head and tail on. Slash sides diagonally to the bone at intervals of 3 centimeters so that fish cooks through.

Heat oil in skillet until it smokes (about 120 degrees Centigrade). Add fish and deep fry two minutes over medium fire. Remove skillet from fire and let fish fry in heat of the oil for one minute. Return skillet to fire. Continue this process until the meat of the fish changes color and is soft. Pour off and reserve oil. Add scallion, sugar, vinegar, soy sauce, salt, wine and stock to fish. Bring to a boil over a hot fire. Boil 3 minutes. Add cornstarch solution, one third at a time. Move fish gently to keep it from sticking until gravy thickens, being careful not to break it. Remove fish to a platter. Pour gravy over fish.

Heat oil in skillet until it bubbles. Cut vermicelli into 20 cm lengths. Add vermicelli and deep-fry till noodles puff up. Remove vermicelli and heap on fish. Serve immediately.

While the fish is being eaten, the vermicelli is removed to another dish. Serves four.
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Lesson 11

Beijing Weather

王珍：你怎么穿这么单薄？没
Wang Zhen: Ni zênme chuān de zhéme dànbó? Méi
带来的厚一点的衣服？
dãilái hòu yìdiǎn de yīfú?
王珍：
Wang Zhen:

丽娜：没有，我来中国以前，有
Línà: Méiyǒu, Wǒ lái Zhōngguó yǐqián, yǒu
Not have. I come China before, have
人告诉我中国冬天不
rén gào su wǒ Zhōngguó dōngtiān bù
person tell me China’s winter not
tāi lèng, xiàtiān yě bú tài rè,
too cold, summer also not too hot.

王珍：对，中国大部分地区处在
Wáng Zhen: Duì, Zhōngguó duìbù fù de qū de zài
Yes, China’s most part areas locate at
北温带，但是由于领土
běi wēntài, dànshì yǐ qiú nú yǔ lǐngtǔ
north temperate zone, but due to territory
辽阔，各地气候差异很大。
lǐuòkuò, gè dì qìhù chàyí hěn
evast, each place’s climate difference very

丽娜：
Línà:

王珍：
Wáng Zhen:

丽娜：
Línà:

丽娜：
Línà:

丽娜：
Línà:

丽娜：
Línà:

王珍：
Wáng Zhen:

北京的四季分明，三月到
Běijīng de sìjì fēn míng, sānyuè dào
Beijing’s four seasons distinct, March to
五月是春天，实际上春天
Wǔyuè shì chūntiān, shíyà tóu tiān
May is spring, in reality spring

丽娜：
Línà:

丽娜：
Línà:

丽娜：
Línà:

丽娜：
Línà:
Lina: 夏天 有多热?
Wang Zhen: 最高温度 通常是三十五度左右，当然 是 穿 单衣。
Lina: 看来，冬天 的 衣物 我 还 要 再 准备一些。
Wang Zhen: 需要 提前 准备 好，因为 北京 比 南方 寒冷。
Lina: 夏天 的 温度 是 三十五度左右，当然 是 穿 单衣。
Wang Zhen: 夏天 的 温度 是 三十五度左右，当然 是 穿 单衣。
Lina: 看来，冬天 的 衣物 我 还 要 再 准备一些。
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Wang Zhen: 需要 提前 准备 好，因为 北京 比 南方 寒冷。

Notes
1. Showing comparison.
a. Comparisons using 比.
Dōngtiān Beijing bǐ nánfāng lěng. 冬天北京 比 南方 冷。
(In winter Beijing is colder than the south.)
Dōngtiān Beijing bǐ dōngběi nuānhuo. 冬天北京 比 东北 暖和。
(In winter Beijing is warmer than northeast China.)
b. Comparisons using yīxī 一些 and yīdiān 一点.
A small difference is shown with yīxī 一些 (somewhat) or yīdiān 一点 (a bit) after the adjective. Examples:
dāilái hòu yīdiān de yīfu. 带来 厚 一点 的 衣物 (bring warmer clothes),
qūtiān cháng yīxī 秋天 长 一些 (autumn is a little longer.)
These words can also be used as qualifier with the 比 form.
Dōngtiān Beijing bǐ nánfāng lěng yīxī. 冬天 北京 比 南方 冷 一些。
(In winter, Beijing is somewhat colder than the south.)
Wǒ bǐ tā yīdiān. 我 比 他 有一点。
(I am a bit taller than he.)
With 得多 de duō after the adjective shows big difference.
Dōngtiān Beijing bǐ dōngběi nuānhuo de duō. 冬天 北京 比 东北 暖 和 多。
(In winter, Beijing is much warmer than the northeast.)

2. Approximate numbers with zuóyòu 左右.
Placed after a number it gives the meaning of 'about that number.'
ěrshí tiān zuóyòu 二十天左右 (about 20 days)
shíwǔ dù zuóyòu 十五度左右 (about 15 or so degrees Centigrade)
The Flower from Mexico

MA XUN

THE dahlia, a popular flower in China, comes originally from the high plateaus of Mexico and Central America. Somewhere in the early 16th century, Mexican flower-lovers moved the wild plant into their gardens. In the 18th century it migrated to Europe, and then to Asia. Horticulturists have today developed about 7,000 varieties of this handsome flower. China has more than 500, although the flower was introduced into this country only in the present century.

Dahlias are adaptable and easy to raise — they can be reproduced by seeds, cuttings or root separation, and blossom in all seasons of the year if planted at regular intervals. Today they are seen in Chinese parks and private gardens, and in pots or vases in people’s homes. And Chinese dahlia growers have given them such descriptive names as Tea Flower, Red Velvet, Yellow Grated Radish and Ancient Golden Palace.

Although China and Mexico are geographically far apart, the climate in China’s southern regions is similar to that in many places in Mexico. This facilitates exchanges of plant life, which have become more and more frequent in recent years. Mexican wheat, sisal hemp and safflower have settled down in China, while Chinese medicinal herbs such as licorice and Baiakal skullcap and indigenous flowers such as the camellia and rhododendron have taken root in Mexico.

Photos by Jiang Nan

Everyday Expressions

1. 单薄 dān bó thin, single-layer (of clothing), thin and weak
   穿得单薄 chuān de dān bó wearing thin clothes
   身体单薄 shēntǐ dān bó thin (in body)
2. 辽阔 liáokuò vast
   辽阔的土地 liáokuò de tūdì vast land
3. 脱 tūo take off
   脱衣服 tūo yīfú take off clothes
   脱鞋 tūo xié take off shoes
4. 宜人 yírén pleasant, delightful
   气候宜人 qìhuò yírén the weather is pleasant
   景物宜人 jǐngwù yírén the scenery is delightful
5. 温度 wēndù temperature
   温度高 wēndù gāo temperature is high
   温度低 wēndù dī temperature is low

Exercises

1. Answer the following questions in Chinese:
   (1) Give a sentence describing the weather.
   (2) What are the four seasons?
2. Complete the following sentences:
   (1) 他买的邮票比我买的邮票——
   (2) 今天的天气比昨天——
3. Change the following statements into questions:
   (1) 买这条围巾需要十块钱左右。
   (2) 你十点钟左右来找我。
4. Read the following paragraphs:
   中国大部分地区处在北温带，冬天不太冷，夏天也不太热，但是由于领土辽阔，各地气候差异很大。
   北京是在北方，冬天比南方冷一些，比东北又暖和得多。北京四季分明，三月到五月是春天，九月到十一月是秋天。春天春天穿夹衣或毛衣就可以。夏天穿单衣。虽然最高温度要摄氏三十五度左右，但是最热的时间并不长。冬天最冷是零下十五度左右，需要穿厚呢大衣，或棉衣，而且需要穿毛裤或棉裤。
   北京室内有取暖设备，所以冬天屋里很暖和。