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Gift presented to President Kim Il Sung by the Central Committee of the Communist Party of the Soviet Union and the Government of the Union of Soviet Socialist Republics in September 1958



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Front Cover: Children of the Phyongchon District Mirae Kindergarten raise cheers at the national flag

Photo by Hwang Jong Hyok



Back Cover: New features of Pyongyang Metro (in the underground platform of Kaeson Station)

Photo by Ri Song Ik

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DPRK's Universal 12-year Compulsory Education and Its Future

IN THE DEMOCRATIC PEOPLE'S Republic of Korea the State, regarding education as an essential matter on which the victory of the revolution and the future of the nation depend, has been organizing and providing education in a responsible manner.

In the course of providing universal 11-year compulsory education for decades, the State established a scientific education system on the free basis and pushed ahead with the construction of socialist culture by combining general education with technical one on a high level.

At present education work for development of science and technology and training of able personnel is the fiercest part of the competition for greater

national power. Accordingly, the DPRK makes sure that the ideal of all-people education and learning is realized on a higher level.

Kim Jong Un, Chairman of the Workers' Party of Korea, said that to turn the country into the one of education and a talent power through an educational revolution it is necessary to regard the education work as one of the important national affairs and push it forward as the concern involving the whole Party, the entire country and all the people. And he took practical relevant measures. As a result, investment in the sector of education further increased from 2012, and the preparation was promoted to enforce universal 12-year compulsory education. The updating of the edu-

cation system was actually a bold decision in view of the fact that the country was advancing socialist construction amid the vicious blockade and sanctions of the hostile forces.

In June Juche 101 (2012) the Supreme Leader examined the curriculum of general secondary education as a whole, and pointed out that the education program should be boldly improved in the Korean way. Thanks to him the 6th Session of the 12th Supreme People's Assembly held on September 25, 2012 adopted a law to enforce the universal 12-year compulsory education.

The enforcement of the education was not merely a matter of extending the education system by a year. It meant a historic starting point for a great change in the sector of education, that

Children enter primary school wearing uniforms and carrying satchels and other school things provided by the State. Photo taken in April 2019





Notebooks and satchels are produced for students. Photos taken in 2019



► is, perfecting the education system, reforming the contents and methods of education and improving educational conditions and environment radically as required by the new century.

Thanks to the Supreme Leader's determination to turn the country into a talent power as soon as possible, all the preparation for the comprehensive enforcement of the new education system was completed in a short period of time, and the general secondary education system was further perfected in such a way as to train as able personnel as required by the present age.

The Supreme Leader clarified specific tasks and ways to radically improve education, and has energetically led the work to enforce the new education system.

There were built apartment houses for Kim Il Sung University teachers, those for teachers of Kim Chaek University of Technology, the Wisong Scientists Residential District, Mirae Scientists Holiday Camp and so on for scientists and teachers.

The Supreme Leader

solved the problem of paper for production of textbooks, and took a step to provide students with new school uniforms according to different kinds of schools, sexes and seasons. Under his meticulous care and guidance the Mindulle Notebook Factory and the Pyongyang Bag Factory were built with modern equipment, and orphanages, orphans' primary and secondary schools and schoolchildren's palaces and children's camps appeared across the country.

True to the lofty intention of the Supreme Leader there took place a campaign involving the whole Party, the entire country and all the people to enforce the new education system.

Meanwhile, the Supreme Leader inspected educational institutions in both sectors of general and higher education including Changjon Primary School and Wisong Junior Middle School and Pyongyang University of Architecture, Pyongyang Teachers Training College and Kim Chaek University of Technology. During his inspection of Pyongyang University of Architecture, he promised that he would become honorary president of the university to give active backing to

its work.

In accordance with his noble intention the university made its education work IT-based, modern and advanced and was provided with educational conditions and environment on a high level as the centre of science, information, data service and online education in the sector of architecture.

One January day in 2018, in the teeth of midwinter cold, the Supreme Leader inspected Pyongyang Teachers Training College. That day he said that educational revolution was inconceivable apart from achievements in educational science, and instructed that colleges and schools should be renovated well as befit the bases of cultural revolution to suit the students' convenience in study and life and meet the pedagogical requirements.

The general objective of education in the country is to turn the work into the one good enough to bear the responsibility for the nation's future.

Efforts are made in earnest to make the contents of education practicable, comprehensive and modern.

The ranks of teachers are being consolidated with their ►

► qualifications and sense of responsibility being improved steadily.

The excellent of middle school graduates are recommended to teachers training colleges and universities of education, and the quality of teachers' training is being improved radically.

And due attention is paid to the shortage of teachers in rural and mountain areas for proper solution, and their in-service training and the work to provide them with good conditions are done properly so as to narrow the gap between the central

cities and the local areas in educational levels.

Efforts are also made to ensure the domestic production of experimental equipment and materials along with the establishment of an integrated educational information network, the speedy construction or renovation of teachers training colleges across the country and the turning of all their classrooms into multifunctional ones, thus laying the proper material and technical foundation for talent training.

The improvement of educational conditions and environment is pushed ahead with as a matter of nationwide concern. This year seven new school boats were built and put into operation for schoolchildren of mountain villages in Jagang Province and various other measures have been taken to consolidate the material and technical foundation for education.

New contents and methods of education are being spread to good effect, thus developing the overall educational work of the country rapidly and in a balanced and coordinated way. Educational systems are being further renovated and perfected with novel contents and methods

of education.

In particular, the sector of secondary education is increasing the number of technical senior middle schools according to the characteristics of each locality and its demand for technical personnel, and inventing the methods of education to help students develop the studying ability and put what they learn into practice.

A large number of colleges are successively bringing about sci-tech achievements of high value through brisk combination of education, scientific research and production.

Online education is going ahead dynamically on a nationwide scale.

The Sci-Tech Complex situated on Ssuk Islet in Pyongyang is an edifice for all-people study in the new century that is making an active contribution to implementing the WPK's policy of making all the people well versed in science and technology. Lots of people visit the complex almost every day.

The Korean people's effort to realize the Party's intention to bring about a radical improvement in education in the new century will surely bear fruit.

Yom Song Hui

Children take the boat for their exclusive use to go to school in the mountainous Jagang Province.

Photo taken in June 2020





Lectures are given based on virtual scenes and virtual environments.



Practical qualities are developed.

A Day at Kanggye Teachers Training College

KANGGYE TEACHERS TRAINING College is situated on the bank of the Jangja River in Kanggye, Jagang Province.

Some time ago, I visited the college for news coverage. Entering the campus through the

front gate at 7 a.m., I got a general view of the college, whose building was covered with a blue roof, along with a gymnasium and a football ground covered with artificial turf. Students were already cleaning the cam-

pus. Some students were cleaning the front staircase to the college building, and others were sweeping the outdoor sports ground with a lot of apparatuses like horizontal bars and uneven bars. Among them was Jang Pok

▶ Sim, a third-grader specializing in information science. She said, "I think we can become attached to and have a will to add lustre to our street, village and school only when we value and keep them clean. So every morning I clean my classroom and the compound of the college together with my classmates. Now it has become a daily routine."

All her classmates said in unison that such an attitude enabled her to take third place at the 19th National University Students' Software Contest held in August last year, displaying the honour of the college.

At eight o'clock, the bell rang and all students began to take classes. I wanted to see those who were training themselves into future educators, so I looked round some classrooms. The classes were different in teaching content and method—children's literature, family pedagogy and juvenile hygienics—but had something in common: they took place using virtual scenes and environments.

Kim Un Ju, principal of the college, said, "My college is giving priority to the introduction of advanced science and technology into teaching. Last year we began to introduce artificial intelligence technologies like voice-recognition technology into teaching. It is very effective."

Then she told me about achievements her students had made in different contests and festivals: Kim Ye Jong, a third grader of the preschool pedagogy course, took second place at the 5th national teachers training college students' memory contest in July last year; Choe Song Hui and Kim Jong, second graders of the information science course and preschool pedagogy course respectively, won special prizes at the 5th national exhibition of IT achievements in November last year; and other students were highly appreciated at eight differ-

ent contests and exhibitions last year, including a national teachers training college students' foreign language listening and conversation contest and a national university students' exhibition of information science and technology achievements.

Their enthusiasm for study became clearer to me during the extracurricular activities and practices taking place from 3 pm. One of the favourites of the students during the hour was a place for learning how to develop children's intelligence. The place was provided with an im-



In the dormitory.



► aginary living environment, for example, a bed, a dining table and a study room. There the students were learning how a teacher should act in concert with mothers in educating children and how mothers should educate their children at home.

Teacher Kim Ok Hwa said that students call the place mother's classroom.

Then I dropped in at the college's gymnasium where students were under fitness training or practising various sports techniques. There I met Ri Nam Sun, a second grader of the information science course; Han Sun Jong, a second grader of the English course; and Pak Su Gyong, a second grader of the art course. All of them were the best skiers of the college, I was told. They won second place at the National University Students' Ski Contest held in January this year. They said to me, "We will train hard to win first place next year."

I also saw other students engrossed in study and practice in a foreign language laboratory, a three-dimensional structure room, a dance training room, and rooms for practising primary school education.

Now darkness started to fall. After finishing the day's study, students were back in their brightly lit rooms of the dormitory. Among them were Ri Yun Sim, a second grader of the art course who took first place at a national university students' mobile artistic promotion team contest held in August last year, and her classmates. Their singing of the song *Let's Learn*, accompanied by the guitar, echoed, breaking the silence of the evening. Enjoying the music that aroused a happy feeling about today and the hope for the future, I left the college.

Article by Kim Son Myong
Photos by Hwang Jong Hyok

Competent Teachers

PYONGYANG SENIOR Middle School No. 1 situated in Pothonggang District, Pyongyang, has many teachers who are dedicating themselves to the education of the rising generations without seeking any fame of their own. Ri Ik Son, head of the physics department, is one of them. In his 36-year-long career he has received over 50 diplomas and

certificates of various kinds.

In his mid-twenties he made public the paper *Research for Measuring and Observing Characteristic Quantity of Semiconductor Material by Means of Scanning Electron Microscope*, striking the circle of physics with wonder. Then he developed an apparatus for demonstrating the laws of motion, and introduced it into les-

Ri Ik Son teaches the movement of a rigid body using a top.



► sons. It was an experimental apparatus showing Newton's laws of motion with a computer-aided device. He has also written a lot of textbooks and reference books such as *Physical Theory, Functionality of Physics* and *Physical Experiment*. In the course of this he received two DPRK certificates of invention, 25 certificates of new idea, three certificates of registered sci-tech achievement, and over 20 certificates of registered education support program and of registered new teaching method.

Jong Un Hui is a chemistry teacher, who has engaged in education for over 20 years after graduating from Kim Il Sung University. Her mind is always filled with a sense of pride as a teacher. She is wont to tell students that they can contribute to the country as much as they know. And she teaches them what attitude they should have in learning in order to support the country with chemistry before teaching them the ABC of the subject.

A lot of her students have ranked among the top three winners at the national multi-subject academic contest year after year. She has written many textbooks and reference books, proposed new ideas and made inventions needed for the education of the rising generations, and thus she has received scores of certificates. She also spoke to a national symposium on educational science, a national meeting for presenting experience in instruction and edification, and a national symposium on subject-specific teaching methods. She is an October 8 Model Teacher.

Ri Kwang Il is a mathemat-



Jong Un Hui gives guidance in a chemical experiment.

ics teacher. He has the knack of helping students develop their intellectual faculties to suit their age and characteristics. Once there was a task of guiding the students who would participate in the International Math Olympiad on their study. As the contest was recognized as a "window" to judge countries' educational level and development prospects, they all paid deep attention to it. And the level of the contest was considerably high.

Though Ri was a new teacher at that time, he took charge of

the students with the determination to challenge the world. While imparting to them in-depth knowledge of number theory, algebra and geometry, he made efforts under a scrupulous plan to help them develop their concentration and cogitative faculty to the maximum. Thus he made a great contribution to the students' winning gold and silver medals in several rounds of the International Math Olympiad.

Article by Sim Chol Yong
Photos by Ri Chung Guk

Ri Kwang Il.





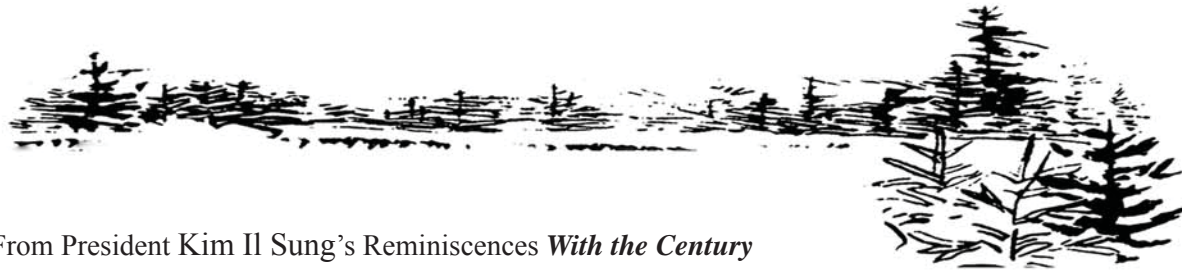
Mangyongdae Schoolchildren's Palace

MANGYONGDAE SCHOOLCHILDREN'S PALACE IS A COMPREHENSIVE after-school education and edification centre for schoolchildren. It has some 150 circle rooms and practice rooms which can accommodate as many as 5 000 chil-

dren a day simultaneously. It provides all conditions for the schoolchildren to develop their talent and hope as much as they want in accordance with their aptitudes.

Photos taken in 2019





From President Kim Il Sung's Reminiscences *With the Century*

20 Yuan

...
MY BOYHOOD WAS SPENT without any knowledge of money. My father never gave money to his children. When I needed notebooks or pencils, he asked my mother to buy them, forbidding me to go to a shop or market. My father held that if one became interested in money in childhood, one would grow up a miser and snob devoid of regard for one's country and nation.

One day, my father, who was bedridden, suggested going sight-seeing and came out of the house taking me along. It was an unprecedented event for my bedridden father to go onto the street with me. He had occasionally taken me along when he needed an interpreter, because he did not speak Chinese well. I was a faithful interpreter for my father.

"Apparently, something urgent has happened, as he leaves the house when he is seriously ill. Why is he in a hurry? Whom is he going to meet?" I thought as I helped my father out of the bed.

Only when I was outside did

I remember that it was my birthday. As my father was sick in bed, I had no time to think of my birthday.

After looking round the street, my father unexpectedly went into a shop taking me by the hand. This outing went beyond all my expectations. "Why has he brought me to this shop?" When I looked at a show-case, silently preoccupied by this thought, my father told me to choose a pocket watch. This shop displayed a lot of pocket watches; some of them bore portraits of Sun Yat-sen.

I chose one without Sun's portrait and my father paid 3 *yuan* 50 *fen* for it.

He said in a serious tone of voice:

"You are old enough to have a watch. A man fighting to win back his country must value two things. One is his comrades and the other is time. I give you this birthday present in the hope that you will value time. Keep it well."

I accepted his words as meaning that I had become a man.

Somehow I felt that I was

hearing his last wish. He apparently felt that his days were numbered. In this frame of mind, he gave me the watch and also passed on to me the independence cause which he had devoted all his life to. The event amounted to a celebration of my manhood.

Less than two months later, he passed away. I subsequently entered the Hwasong Uisuk School with this watch, met like-minded people there and organized the Down-with-Imperialism Union. During the guerrilla struggle, I followed my daily routine by this watch and set the time of attacks and rendezvous by this watch.

Around the time of the Pochonbo battle, I received a wristwatch in place of the pocket watch. My comrades-in-arms suggested that I wear a new wristwatch for the sake of a commander's dignity, as my pocket watch was now outmoded. I gave one of my comrades the pocket watch I had kept for 10 years and put on the new wristwatch.

My father thereby made sure that I grew up with no knowledge

▶ about money until I began to fight for the revolution. Only in Jilin did I buy myself things in shops.

If I say that in this way I became indifferent to money, the reader will not consider it strange. Reviewing my 80 years of hardships, I would like to tell young people that if you are captivated by money and wealth, you become a dirty man, who is disloyal to the leader and the Party, the fatherland and fellow people and, worse still, thinks nothing of his parents, wife and children.

Strict control of the children, to prevent them becoming interested in money from childhood, represented a peculiar family tradition established by my father.

However, my mother broke with this tradition for the first time, when she faced her death and gave me 20 *yuan* as an inheritance, the epitome of her life of hardships.

I received the money as a treasure, feeling as if the whole of my mother's hard life were condensed in a few notes. These notes were like an amulet for me. This money dispelled hunger, cold and fear from me. I felt as if my mother were protecting me with her body and soul, always staying near to me. I decided not to spend this 20 *yuan* on myself, whatever might happen. I wanted to keep it for ever, if possible, as a token of my mother's love for me.

However, grave reality shook my determination many times. I hesitated many times over use of this money, fumbling in my pocket. We had faced a number

of situations, where money was required.

When we parted with the memorable old man Ma, who saved my company on the heights of Luozigou, I offered this money to him as a token of my gratitude. It was only natural for a man to wish to thank his saviour. If I failed to repay his kindness when I had money in my pocket, after consuming the old man's provisions for one year, by staying in his mountain hut for nearly 20 days, heaven would blame me. But this saintly old man declined the offer. "While fighting to liberate the country you may find yourselves in greater difficulty than now. Use the money in such times. I am nearly dead and money is no good in this remote mountain, so I don't need money. I can make a living by catching wild animals with my noose."

So the 20 *yuan*, a token of my mother's love for her son, remained in my pocket.

If I dressed the ragged children with this money, my mother, too, would be happy. "Mother, four years have passed since I left you with this money. I have kept it until now to provide against future need, although I have gone through many crises. Now, however, I must spend it. I must provide clothing for children who have no kith and kin in the world. Although I realize that I may encounter more trying situations in the future, I have made up my mind. I hope you will support my determination. You know that I am very fond of children," I said

to myself, turning to my mother who lay buried alone on the cold slope of the Tucidian valley.

"Go to Fusong county town with this money and buy cloth. Make clothes for the children," I ordered regimental political commissar Kim San Ho.

He was extremely embarrassed and received the money with reluctance. As he had been my companion for years, working for the Anti-Imperialist Youth League since his days in Wujiazi, where he had lost one finger bitten by a straw cutter, while working as a farmhand for a landlord, he knew the details of this 20 *yuan* better than any other man.

"General, I must obey your order, but I feel my hands trembling. What kind of money is this?"

He went to Fusong county town and bought seven or eight rolls of gabardine-like fabrics, which cost ten *fen* a foot. Although he was a man of great strength he said that his tongue nearly lolled out carrying them on his back. On the way back he was robbed of all the fabrics by the remnants of mountain rebels who had become bandits. The bandits ran away after binding him to a tree, so he was nearly frozen to death, although he was strong as an ox. I sent a small unit to save Kim San Ho and take back the fabrics.

Seven or eight rolls of cloth were not enough to provide all the children with clothing. I wrote to Zhang Wei-hua and sent Kim San Ho again to Fusong with the letter. Kim San Ho obtained a lot

► of cloth with the help of Zhang. We made clothes for the children and one hundred soldiers enlisted in the new division, after shaking off the stigma of “Minsaengdan”. Now my heavy heart was somewhat lightened.

In fact, 20 *yuan* was not a large sum. But I felt greatly relieved at the time. Then we left Maanshan.

The children in new clothes were ecstatic and begged us to take them with us. I agreed to take them despite numerous objections. Apart from children who were too young to follow us and the sick, most of them joined us on the arduous southward march. It was quite an adventure for the revolutionary army, which was moving from one place to another to engage in guerrilla warfare, to take the teenagers with it. Although it was unprecedented in the history of guerrilla warfare and went against common knowledge, I was determined to train them in the flames and raise them all into men of iron will. It was hardest to jump over fallen trees and cross rivers. Consequently we assigned each soldier the task of protecting the children in battle and on the march. Our soldiers protected the children as the apples of their eyes. They brought them up, carrying the children in their arms, when passing fallen trees and taking them on their backs when crossing rivers and protecting them with their bodies from the enemy fire.

The children who followed me

to the Mt. Paektu area all joined the revolutionary army and grew up into excellent military and political cadres through fierce battles. Nine-year-old Ri O Song who had stayed in the Dajianchang secret camp for a while, because he was not allowed to follow the army, also served as Sun Changxiang’s orderly and later came to Changbai and became my orderly. He was scarcely 12 years old in May 1939 when my unit advanced to the Musan area. He could not cross the river by himself because it was too deep, so I carried him in my arms across the river. The children who grew up under our wings now play a pivotal role in our Party, state and army.

I was so indignant and shocked at the sight of ragged children in Maanshan that I resolved to establish a system after the country’s liberation, whereby the state would provide children with clothes free of charge. In the latter half of the 1950s, when we were reconstructing the country, which had been devastated in the war, our state began to supply children with clothes. It was a miraculous success, which could only have been achieved by the Korean communists who had experienced the sorrow in Maanshan. Every year we spend hundreds of millions of won on children’s clothing.

Foreign visitors to our country sometimes ask me, “If the state spends so much money on free clothing, surely the state loses out? Everyone can buy cloth in the shop and make his or her

own suit. Why should the state provide children with school uniforms? How do you make up for the losses from free clothing?”

I respond by recalling the days when I had met the ragged children in Maanshan. It is only natural that politicians from capitalist countries with no experience of the anti-Japanese war do not understand the historic meaning of the policy of the Government of the Republic and consider it only from the financial point of view. A “loss” incurred by the state for the good of the people is not a loss. The more money it spends on the people’s welfare, the greater happiness our Party feels; and the greater the “loss” it incurs for the children’s sake, the more our state is satisfied.

I believe that as long as the socialist system exists and the traditions of Mt. Paektu are carried forward in our country, such a communist policy as state provision of clothing for children will continue to be implemented in the future.

As well as all the children of the country, the former Children’s Corps members of Maanshan and anti-Japanese war veterans receive every season new clothes, thanks to the benevolent care of Organizing Secretary Kim Jong Il.

On my 70th birthday Ri O Song and Son Myong Jik appeared before me, wearing new uniforms which the Secretary gave them as a gift, and recalled the days in Maanshan with deep emotion. □

For Development of DPRK

Popular Design of National Emblem

IT WAS ONE FEBRUARY day in Juche 37 (1948) when the national flag and emblem of the Democratic People’s Republic of Korea to be founded were under all-people discussion for the first time in the history of the nation.

Kim Il Sung, leader of new Korea, asked an official if there was any opinion about the national emblem and flag.

During the mass discussion the design of the national flag was absolutely supported, but that of the national emblem was in dispute, and some of the opinion was that the design with a blast furnace in it looked dark and dull. This meant that the design of the national emblem was not perfect enough to receive absolute approval from the people.

Understanding that, the leader said the national emblem should reflect well the prospect of the country’s development and that the national emblem should reflect the matter of electrification of the country in order to show the bright future of the country that would develop into one of the developed prosperous and powerful states in the world. Then he said that if something like the Suphung Power Station in the country was drawn in the design it would be able to visually express the prospect of electrification of the country, and instructed that a shining red

five-point star like that of the national flag should be drawn over the power station, that they should be flanked by rice ears of a lot of grains bound with a red band and that the name of the country should be written in the centre of the band. He went on to say that the national emblem should be designed to depict the unity and cohesion of the broad masses of the people based on the worker-peasant alliance with the working class as its core, and the prospect of the development of a modern powerful industry and advanced agriculture. This is my opinion about the design of the national emblem, Kim Il Sung said.

Now the blast furnace was replaced with a hydropower station in the design of the national emblem, which reflected the bright future of the country that would attain complete electrification.

The design caused a great sensation among the people from all walks of life. It depicts a spectacular sight of water pouring from the dam of a hydropower station under Mt Paektu with a red five-point star over it. The design reflected the bright future of the country that would turn into a socialist power, and the image of the Korean people who would enjoy happiness from generation to generation in a land as good as paradise.

Meaning of September 9

On September 9 decades ago

Chairman Kim Jong Il told officials that whenever the anniversary of the founding of the DPRK came round he would remember the great leader [President Kim Il Sung], and that the day was of greater significance in that it marked the day when the great leader was elected the first head of the sovereign and independent state, than in that it was the one when the founding of the Republic was proclaimed. He went on to say that as there was the DPRK, the great country established and led by the great leader, the Korean people could lead a happy life, and eternal prosperity was awaiting the nation, that the dignity and honour of the nation were ensured by the prestige of the leader, that the country was inconceivable apart from the great leader, that the Republic was closely connected with the august name of the leader and that modern Korea was the great leader Kim Il Sung’s Korea.

The Chairman said: When our leader was 34 he liberated the country. And when he was 37 he founded our Republic and was elected head of the State. There are a lot of national leaders in the world but none of them could match our leader who embarked on the road of revolution in his early years, led an unprecedentedly arduous anti-imperialist national liberation revolution to victory and was elected head of state at such a young age.

Yom Song Hui

The State and Its Master

IT WAS THE KOREAN PEOPLE'S LONG-cherished desire to live happily and freely with equal rights in a country free from exploitation and oppression. The desire was unusually strong as the people underwent a bitter life as colonial slaves under the Japanese imperialists' military occupation (1905–1945).

Their yearning to become masters of their country turned into reality with the founding of the Democratic People's Republic of Korea (DPRK) on September 9, 1948 after the liberation of Korea on August 15, 1945.

In February Juche 36 (1947) the Conference of Provincial, City and County People's Committees of North Korea was held for the establishment of the People's Assembly of North Korea. A 78-year-old peasant representative delivered the opening address on the first day of the conference. He had been a miserable servant and sharecropper of a landlord for three decades. After the liberation of the country he cultivated well the land he had received from the State, thus paying agricultural tax in kind ahead of others, and donating rice to the country out of patriotism. Then he was recognized as a model peasant, and elected as a member of the local county people's committee.

The day before the conference Kim Il Sung, leader of the new Korea, met the old man and heard him talking about his family background. Then the leader said: Our peasants have now become the eternal masters of the country and of land. What a good system it is as an elderly person like you has been elected as a member of the people's committee! I want you to give the opening address.

Like this all the working people including the old man became able to take part in exercising power and managing the State as the genuine masters of the country with the founding of the DPRK.

Today the Korean people are all equally eligible to take part in election freely, and their true servants are elected deputies to the power organs at all levels. Among the deputies are officials who are called after the word of "our," industrial and agricultural workers, scientists, artistes and sportspersons including many women.

Through democratic reforms the Korean people became real masters in all fields of social life, bringing about their own happiness with their own efforts. The reforms were of significant importance in providing the working masses with the socio-economic and cultural conditions for creating a new

life. After national liberation the agrarian reform took place under the slogan of "Land to the tillers!" and the industrial nationalization was completed. As a result the people became the owners of not only land but also all factories, mines, power stations, railway transport, communications, banks, and commercial and cultural facilities.

Not only the post-liberation democratic reforms but also social changes in all stages of the revolution in the country took place in keeping with the aspirations and requirements of the people, including the agricultural cooperation and socialist transformation of capitalist trade and industry and private handicraft.

Now the Korean people are fully enjoying the political, economic, ideological and cultural life suited to the intrinsic requirements of independent human beings as masters of the State and society under the people-centred socialist system.

They, irrespective of sex, occupation, property status, standard of learning, political view and religion, are fully provided with democratic freedom and rights, for example, such political rights and freedom as the right to elect and to be elected, freedom of speech, the press, assembly, association and demonstration, and the right to submit complaints and petitions. They also have the right to get a job, be rewarded according to the quantity and quality of work done, and to get free education and free medical treatment, and the freedom to engage in scientific, literary and artistic activities, and the State legally takes responsible care of their material and cultural life.

In however difficult a situation, the State invariably maintains free education and free medical care at its expense, and all the people develop into civilized persons while learning to their heart's content and participating in mass-based sports, cultural and artistic activities.

As the masters of the means of production they play the role as such in the economic management, leading a creative working life with the right to work. Moreover, they are provided with an equal and rich material life thanks to the popular policies of the Workers' Party of Korea and the DPRK government.

The Korean people are enjoying a sound and rich ideological and cultural life as masters of ideology and culture. As the masters of all ideological and cultural establishments and means they manage and operate them so as to meet their politico-ideological and cultural and emotional requirements.

Seventy-five Years of WPK (9)

Motherly Party

THE WORKERS' PARTY OF KOREA (WPK) has always showed primary consideration for the people while leading the revolution. The history of the WPK consists in the time of valuing the people and sparing nothing for them. So, referring to the Party as mother the Korean people trust and follow it faithfully while entrusting their life and destiny entirely to it.

Motherly Party—this definition of the relations between the WPK and the popular masses is not the result of artistic or philosophical study.

Since the first day of its founding on October 10, 1945 the Party has always led Korea successfully performing great exploits: It led the building of a new country after Korea's liberation from the yoke of the Japanese imperialists' colonial rule in August 1945; led the Korean people to win victory in the Fatherland Liberation War in the 1950s; led the postwar rehabilitation and socialist construction and enforced popular policies like universal free compulsory education and universal free medical care. All these momentous changes exerted tremendous influence upon the socio-political life of the people. The dramatic change in their destiny enabled the people fully to realize for what the WPK exists and whom it serves.

Actually the people's knowledge of the Party in its early days was merely that it was a political organization which guides the country and revolution. Through their new life bettering amazingly day after day they gradually began to feel its ex-

► The Party and the State provide the people with the conditions for their ideological and cultural life in a responsible manner. As a result, the Korean people are creators and enjoyers of spiritual and cultural wealth.

In recent years a lot of structures have been built in the country for the sake of the working people—everything best is allotted to them. The 13th meeting of the Political Bureau of the Seventh Central Committee of the WPK held in June last stressed the need to take strong State measures to construct apartment houses and solve other problems related to the people's life.

istence keenly. The peasants, who had been living under the burden of debts through generations, became owners of the fertile land, and the workers, whose families had depended on their daily wages, became masters of factories. A miserable servant of a landowner learned how to write his name at an adults' school for the first time in his life, and was elected as a deputy to the Supreme People's Assembly.

During the Fatherland Liberation War against the US imperialist aggressors (1950–1953) the Korean people witnessed the image of the Party as the advocate of their interests: Even in wartime when the fate of the country was at stake the Party pursued popular policies such as free medical care, taking warmer care of the people's life.

With the passage of time, the people felt closer to the Party in their life. Under its tender care brick houses were built on the debris of war across the country, and schoolchildren equally received new uniforms and school things season after season.

The WPK's line and policy to build a people-centred socialist system were always correct, its leadership was always wise, and the benefits granted by it were always substantial and impressive. Through their actual life the Korean people keenly realized that their destiny was connected with the Party, and were convinced that the Party was their *mother* taking responsible care of their life and des-

In the country it is regarded as a matter of paramount importance to satisfy the demands of the people and promote their interests under the slogans "Everything for the people and everything by relying on them!" and "Let the entire Party make selfless, devoted efforts for the good of the great people!" Nothing is spared for the people while devoted efforts are put in for the good of them. This is why the Korean people have a strong attachment to the socialist country of Juche, the cradle of their life, and genuinely love the country where their ideals come true.

An Song Duk

▶ tiny.

The Party's love for the people is still invariable. Supreme Leader Kim Jong Un regards selfless devotion to the people as his one and only motto. Regarding the improvement of the people's material and cultural life as the most important of the State affairs he has to attend to, he visits industrial establishments, farms and fishing stations despite a severe snowstorm or the midsummer heat. One July day in Juche 103 (2014) he visited the Wonsan Leather Shoes Factory. There he earnestly said that the factory should normalize production on a high level, and mass-produce light and durable shoes convenient to put on and good to see and for different seasons and purposes. On another visit to the factory in January the next year he measured the weight of shoes and highly praised the factory's progress in implementing the Party's policy of mak-



Flood victims move to new houses in the northern region of North Hamgyong Province in November 2016.



ing light shoes.

In December 2016 the Supreme Leader inspected the factory again. Then he said that he was pleased whenever he visited it, and that it was just to his liking. He continued to say that he would discuss with the factory managers and take relevant measures to solve all problems arising in production, technical renovation of production processes, and designing.

When he visited the factory for the fifth time he saw with great satisfaction a scene of shoes being churned out. Saying that he was really satisfied and pleased, he took a souvenir photo taken with the workers on the spot.

When he visited a new mushroom farm, he said that he was very pleased to see a marvellous structure built for the people at the very beginning of the New Year. He remarked: How good it would be if each day of the year was like today.

And when he saw rich fruit harvest in the Kosan General Fruit Farm, he said that the apples seemed to have been dyed red, that everything at the foot of the Chol Pass looked red, that he was never tired of seeing the scenery of the farm, and that it added to his delight.

Such anecdotes can be heard at the Pyongyang Kim Jong Suk Silk Mill, the Pyongyang Kim Jong Suk Textile Mill, the Phyongsong Arti-

▶



Necessaries and medicines are supplied to residents in the flood-damaged Taechong-ri, Unpha County, North Hwanghae Province in August 2020.



▶ ficial Leather Factory, the Ryuwon Footwear Factory, the Ryongaksan Soap Factory and the Pyongyang Dental Hygiene Supplies Factory.

The Supreme Leader sees to it that such bases for the improvement of the people's living standards are created never because there is enough money to spare or there are favourable conditions and environment.

Mothers do not feel exhausted even if they spend all night preparing the dish to their children's liking, and even if they have to make their way through virgin snow all night, they are happy to think of their beloved children being pleased even for a moment; and if officials walk more than others and work hard with less sleep like mothers, the people will be happier. This is an idea of Kim Jong Un, Chairman of the WPK.

The August 7, 2020 issue of *Rodong Sinmun*, the organ of the Central Committee of the WPK, carried the news that the Supreme Leader inspected the flood-stricken Taechong-ri area, Unpha County, North Hwanghae Province, to size up the damage personally. Having heard that due to consecutive days of torrential rain and rainstorm caused by the seasonal rainy front, the waterway levee had given way there, leaving more than 730 single-floor houses and 600-odd hectares of paddy fields inundated and 179 blocks of dwelling houses collapsed, he headed for the afflicted area immediately, putting everything else aside. Walking around the damaged place he took all necessary measures to stabilize the life of the local inhabitants as soon as possible.

Still worried, he visited the area again early on

the next morning, walking round different places along the muddy path and working out a big plan to build dwelling houses for the local people in the shortest possible time. When an idea was suggested to build new houses for 400 of the 800 afflicted families while repairing the other houses, the Supreme Leader proposed to pull down all the damaged houses and build new ones, asking to make a good design by considering the desire of the farm workers, that is, if they preferred a private type or a two-families-in-one-building one.

Learning how the homeless people were living, he sent them hundreds of tents and thousands of quilts, as well as daily necessities and medicines, plus rare fish. Receiving such a parental care the local inhabitants were all tearfully thankful.

This is in no way an unprecedented story. Earlier, when thousands of families had been afflicted by the flood in Rason, a northern city in Korea, he had asked to make sure that the people in the damaged area would have no sufferings, even if it would mean the consumption of all the treasure of the nation, and whatever the expense might be. His appeal had moved all the hearts in the country. His profile of sparing nothing for the sake of the people and doing whatever he could for them was indelibly inscribed in all the minds.

Though everything in the world may change, motherly love is eternal. As such love is the nature of the WPK, the people's trust in it is rock-solid, and their will to sacrifice themselves for it without hesitation is invariable.

Ri Jong Nam

Essential Qualities of Man

PEOPLE HAD LONG LIVED without having a correct recognition and understanding of themselves.

“What on earth is man?”

The ancient people who thought that everything in the world belonged to nature concluded that man was part of nature. They regarded man and both the state and society as part of nature, and even considered “God” a being inseparable from nature.

In the mediaeval ages there prevailed the illusory world outlook that man was created by a certain mysterious “being.” As a matter of fact, practices of believing in illusory beings came into being first in the primitive ages. It was in the mediaeval ages that under the support of state power the illusory world outlook became predominant and swayed people. Only in modern times, some attempts were made to find an answer to what man is in man himself. Some people said that man is a being with reason and others, a sensitive being.

Marxism considered man to be the entirety of social relationship, and a being that lives in society. This exploded all the previous unscientific views.

The Juche idea, which is based on the philosophical principle that man is the master of everything and decides everything, newly defined the essential qualities of man in view of social relationship. Man is a social being with independence, creativity and consciousness—this is a new view of man clari-

fied by the Juche idea.

First, the Juche idea elucidated that man is a social being with independence. Independence, one of man’s essential features, is an attribute of the social creature who wants to live and develop in an independent way as the master of the world and his own destiny. Because he has this quality, man throws off the fetters of nature, opposes all forms of social subjugation and puts everything in his service.

The independent demands of people find expression in their struggle against social bondage. Typical examples are the Gladiatorial War against Rome in the first century BC, the Peasants’ Revolt in England in 1381 and the Taiping Rebellion in 1851–1864.

They proved that man is an independent being who puts everything in his service as the master of the world and his own destiny.

Secondly, the Juche idea clarified that man is a social being with creativity. Creativity is an attribute of the social creature that transforms the world and shapes his own destiny purposefully. Man remodels old things and creates the new and thus transforms nature and society to be more useful and beneficial to himself.

Today people, having deserted the caves of primitive men, are building countless modern structures. They are transforming the world by making and using modern machines, computers and artificial satellites instead of primitive stone or ani-

mal bone implements.

With the development of society, science and technology, the creative ability of man increases further.

Further, the Juche idea explained that man is a social being with consciousness. Consciousness is an attribute of the social creature which determines all his endeavours to understand and reshape the world and himself.

If man is to live, he must understand the world and the laws of its change and development. For instance, if he wants to bake bread, he should know the temperature for baking the dough.

Consciousness enables man to think about the matter, learn the method and apply it in practice. Consciousness also makes man persevering, courageous and optimistic. Man endures hunger and shakes off heavy sleepiness in order to achieve his aim, and accomplishes whatever difficult and exacting task, if it is beneficial to himself by overcoming all hardships and exercising his will power. Herein lies another distinctive feature of man which distinguishes him strikingly from an animal which acts on its biological instinct.

With the clarification of the essential features of man by the Juche idea, the curtain fell on the long history of man’s ignorance of himself, and a new history began when man widens the sphere of his mastery of the world, conscious and confident of his position and unfailing strength.

Choe Sol Mi

Quality Cosmetics Developed

THE INVENTION “GANODERMA CULTURE and anti-aging nutritional solution with Ganoderma content” received a patent of the Democratic People’s Republic of Korea. Last year the World Intellectual Property Organization (WIPO) recognized the invention as valuable, and sent a Medal for Inventors and the relevant certificate to the inventors.

Not long ago I went to the Sinuiju Cosmetics Factory to meet the developers. The invention was led by Doctor and Associate Professor Kim Hung Won, a 57-year-old Merited Scientist and head of the industrial experimental centre of the factory. At the first sight he impressed me as a self-possessed scientist.

After graduating from the then biology faculty of the University of Sciences he became a researcher of the factory. In a few years he received dozens of certificates of invention by developing cosmetics like an anti-acne cream and an anti-ultraviolet cream.

It was in 2007 that he decided to develop anti-aging cosmetics. At that time such a kind of cosmetics were widely developed and used a lot, but as they had some limitations they could not satisfy the users’ desire.

Through relevant research Kim came to know that the major cause of skin aging and wrinkling was deficiency of collagen in the dermis. He also made it clear that high-polymer collagen in cosmetics only moisturizes the skin surface. Later he, through countless experiments, invented a method of decomposing collagen by means of Ganoderma, a natural medicinal plant. If Ganoderma is cultivated with collagen added to it, then it will contain peptide and amino acid under 1 000Da. These materials permeate through the layer of dermis and accelerate the synthesis of collagen in fibroblast, thus increasing the content of collagen in the skin.

Now he intensified the research to enhance the rate of decomposition of collagen by increasing the activity of the plant’s bacteria. Jong Un Sim, a laboratory head, and Kim Hye Yong, general manager of



A research project goes ahead to use Ganoderma culture for cosmetics production.

the factory, helped with his research. They studied a lot of data and reference books at the Grand People’s Study House and the Sci-Tech Complex, and made efforts to find out an ideal additive in cooperation with other scientific research institutions.

At last they found out a rational natural additive, and effectively decomposed 75.3% of collagen of over 5 000Da into that of under 1 000Da in the Ganoderma culture solution. In the course of this they discovered that some elements such as collagen peptide in the Ganoderma mycelium culture solution permeate the skin rapidly, activating fibroblast and promoting synthesis of different kinds of collagen.

In 2015 a French analytical laboratory compared the anti-aging effect of Pomhyanggi cosmetics from the Sinuiju Cosmetics Factory with that of Lancome advanced Genifique. The latter was developed by over 3 000 experts of 65 countries for 14 years—it has won nine patents. The result of the analysis showed that Pomhyanggi has more distinctive and better anti-aging effect than Lancome.

Ryu Chol Ho, an office head of the Invention Administration of the DPRK, says, “This patented technology won a gold medal at the 16th National Invention Exhibition.”

Pak Un Yong



Big Things from Small Things

AS SAYING GOES, “TO ATTAIN many advantages at one move,” and it goes for the Chicken Farm 927 situated at the foot of Kuil Hill, Ryokpho District, Pyongyang. It is getting a lot of profits by making effective use of “small things,” which used to be regarded as waste.

Electric Power from Waste

Today the farm is breeding tens of thousands of chicks and chickens for meat and eggs. The excrement from them totals as

much as 15 tons a day. In the past the farm used to put most of the excrement in a dump to produce manure. This caused an unpleasant smell along with gas generated from the decaying excrement, badly affecting the protection of the ecological environment in no small measure.

Now the farm made a plan for producing electricity by using the excrement, and put efforts into the project. Thus it built a methane-generating tank with the capacity of 1 000m³, and completed a methane-based power

production system. Workteam leader Kim Kwang Nam says, “We use some of the produced gas for cooking at the canteen, hostel and recuperation house. The waste heat from the methane production is used for the operation of the bath house and greenhouse and for heating of offices. And the sediment from the production of the gas is used for the production of quality organic fertilizer to be sent to neighbouring farms.”

The farm also uses rice chaff effectively. It gathers rice from

► its fields of scores of hectares, and the chaff from the rice cleaning amounts to dozens of tons. In June 2019 power generation began using rice-chaff gas. Solar energy is also in effective use. Seventy percent of the electricity needed for the operation of the farm comes from the three sources of energy, that is, the chicken excrement, rice chaff and solar energy.

Substitute for Basic Feed

The farm used to depend on cereals like corn and bean for chicken feed. In consideration of the fact that it had tens of thousands of chickens, the amount of cereals consumed for their feed

was not small at all. So the farm paid attention to the matter, and strove to produce substitute feed.

The research team of the farm directed their attention to bean cake first. At that time the farm extracted oil from soy beans gathered from its fields, and sold bean cake from the oil extraction to neighbouring farms at a low price. Now the researchers found out that bean cake was an ideal substitute feed as it contains a lot of vitamins and nutrients. By mixing the bean cake with dried grass gathered from natural grassland, maize straw and other kinds of materials they succeeded in producing substitute feed containing

different vitamins, proteins and minerals. This made it possible to reduce the consumption of grains for feed by 50%.

The farm is also making effective use of the by-products from the chicken processing such as the feather and intestines. In Juche 106 (2017) the research team developed the “Kuilbong”-brand additives for egg-laying and fattening by using peat, chicken feather and intestines.

Now the farm is maintaining the egg-laying and fattening rates at over 90% using the substitute feed and the “Kuilbong” additives.

*Article by Kim In Son
Photos by Ri Song Ik*

Meat and egg production is on the rise.





Visit to Offshore Culture Company

SOME TIME AGO I VISITED THE ONGJIN Offshore Culture Company in South Hwanghae Province. Spectacular were its drying grounds covered with kelp. The smell of the seaweed evoked an unusual emotion.

Kim Chang Su, manager of the company, told me that the scenery of the port was pleasing, but it was more pleasing to gather the kelp from the culture ground.

To experience the joy myself, I followed the manager to get aboard a tug which was ready to set off.

“Start engine!” shouted the captain, and the crew moved swiftly. With a whistle the boat left for the culture ground towing a dozen lighters. Other tugs followed with lighters behind them. Aboard

each lighter were workers with outfits.

The boats approached the place where white buoys were floating closely. As soon as they stopped, the lighters went to their respective sections. Soon the workers started their jobs. They continuously thinned out several metre-long strips of kelp and put them on their boats. The piles of seaweed rose up on the decks with the passage of time.

Someone began to sing the song *Song of Sea*, joined soon by others.

*Seagulls fly over the waters,
You are fore against the wind, my dear.
Yo-ho yo-ho yo-heave-ho
We go unloaded,*

► *But we return loaded.
Yo-ho yo-ho yo-heave-ho
Yo-ho yo-ho yo-heave-ho yo-ho
We ride to the sea.*

Those who sang the song were well-known model workers Choe Yong Min, who was a workteam leader, Kim Yong Jin and Kim Il Bok, the manager told me proudly.

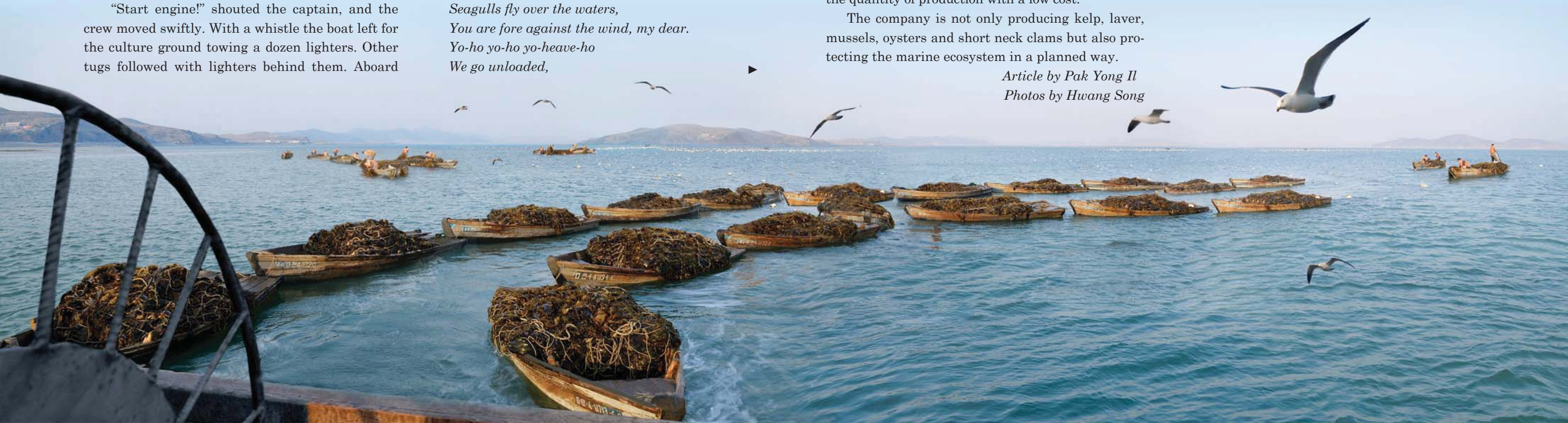
At last the lighters with piles of kelp on them returned to the tugs. The workers were full of joy. Some of them said they would be ahead of others in the production of the seaweed if theirs were measured after arriving at the port. And Ri Kwang Chun, leader of culture workshop No. 3, said full of confidence that they overfulfilled their quota of the day by 20%.

Now the tugs headed for their home towing the full-loaded lighters.

At the port Kang Chol Min, head of the technical department, said, “Offshore farming, too, can be successful only when top priority is given to science and technology. We have made effort to attain the goal of improving the breeding method while increasing the area of the mixed breeding ground.” He continued to say that instead of breeding mussels and kelp by individual areas, they created breeding grounds designed to breed both the shellfish and seaweed in individual stationary nets, and that they changed the old method of using trepang culture grounds into the one of using cage nets, which makes it possible to increase the quantity of production with a low cost.

The company is not only producing kelp, laver, mussels, oysters and short neck clams but also protecting the marine ecosystem in a planned way.

*Article by Pak Yong Il
Photos by Hwang Song*



Devoted to Koryo Medicine



Om Song Chol.

SOME TIME AGO I HAD an opportunity to meet Om Song Chol, teacher of Pyongyang University of Medical Sciences Koryo Medicine Faculty who had been introduced in the *Korea Today* magazine. You readers of the magazine may include those who got acquainted with him while attending his lectures or getting treatments from him.

In 2012 in Bulgaria he gave lectures on Koryo medicine to medical workers from different countries. During his stay there he employed acupuncture and cupping to cure a Bulgarian of febricula he had been suffering from for several months. And he treated a lot of patients who came to see him after hearing the news.

Back home the teacher used natural materials of Koryo medicine to develop medicines by employing classical prescriptions though he was busy with lectures and clinical activities. The medicines include the Compound Wilford Swallow-wort Anti-hepatitis

Pill, which is efficacious in the treatment of cirrhosis and hepatic dropsy, and the Brain Nutrition Capsule which promotes the brain function.

Now, when meeting him, I could not help but become curious about what new medicines he had made. But contrary to my supposition the doctor showed me a high-pressure Koryo medicine extractor. According to him, the device can destroy cell walls of plants without any power consumption, and help increase the efficacy of medicines markedly as never before. I found it good enough to be introduced in Koryo medicine factories.

Om also has put much effort in to develop medical appliances. A nano Koryo medicine-based scratcher he showed me could be held in one hand. The scratch therapy has long been used among the people. The therapy is to scratch or press meridian points or meridian vessels to the extent that they feel warm. It has an influence upon the five viscera and six entrails through the meridian system, thus helping the spleen, stomach, small intestine, large intestine and bladder work properly, and adjusting the balance of the negative and the positive to put functional activities of the body on a normal basis. In view of modern medicine the therapy expands capillaries, controls functions of different secreting glands, promotes the blood circulation, en-

hances immunity and kills pain.

Om developed a nano-Koryo medicine scratcher for the therapy with a readily available material. It is permeated with nano Koryo medicines so that it can produce bioactive effect. The tool can produce the effect of the scratch therapy and that of Koryo medicines and far-infrared ray treatment. This made the scratch therapy more popular.

Om also developed a bioactive indirect moxibustion cup. A far-infrared ray from the cup has several times greater treatment

Some of facilities and Koryo medicines developed by Om.



▶ effect than traditional ones. It helps cure hyperlipemia, prostatomegaly and diabetes in a short span of time without using other medicines.

At the moment Om is intensifying the research to improve health indicators by combining the research successes he has achieved for scores of years in an organic way. Recently he has developed an anionic far infrared ray-based bioenergy radiation device. This pyramid-shaped device helps develop lifelong immunity in the human body and create favourable environments for rehabilitation and retarding of aging.

His research findings were introduced by different publications such as an international traditional medicine journal, and highly appreciated at international scientific and technical symposiums, being registered as sci-tech successes.

Om, however, is not content with his success. He told me of other research projects of his under contemplation or under way. He also told me about his three principles in the development of medical appliances—convenient to use, keep and carry.

He said, “Today non-medical treatment is a worldwide trend. And Koryo medicine provides a lot of natural treatments. I know I’ll improve them on modern lines.”

His research is continuing to improve treatment efficacy by combining the traditional medicine with modern technology.

Rim Ok

Heparin Therapy Draws Attention

SUBMARINE SICKNESS IS an illness that occurs among divers. If the balance between the amount of nitrogen gas that has gone into the body of a diver and that of the gas coming out through the lungs is destroyed when he raises his body from deep water above its surface, the remaining nitrogen gas drops clog the blood vessels. This causes dystrophic degeneration at the part where the body gets a supply of nutritious substances and oxygen.

The disease is regarded as very dangerous as it might cause different kinds of obstinate diseases. In the past its treatment was mainly based on a high-pressure air therapy which provides an underwater environment.

Recently the resuscitation and intensive treatment department of the Kangwon Provincial People’s Hospital has introduced heparin in the treatment, producing satisfactory results.

Jin Ok, a doctor of the hospital, says, “Even the high-pressure air therapy leaves some amount of nitrogen gas in the body. If it is not removed in time, it causes various acute diseases.”

The high-pressure air therapy took 20 to 30 days. So not a few cases developed into extremely serious ones. A combi-

nation of enemiasis and vasodilator therapy was used in order to prevent it. The method, however, required a long period of time, and the disease recurred several months or years later.

Jin Ok, with a dozen years of experience in the treatment, strove to find out an alternative way. In the course of this she came to pay attention to heparin.

Heparin had been used in the treatment of phlebemphraxis and myocardial infarction and as an anticoagulant during surgical operations as it can prevent blood coagulation. Its introduction showed remarkable effects. It helped shorten the period of treatment by half compared to the old treatment and reduce the administration of medicines by 30%. Now the heparin therapy has brought a ray of hope to the patients poisoned by carbon monoxide and submarine sickness cases.

Pak Ok Nyo, a doctor of the Munchon Municipal People’s Hospital, says, “The advantage of the therapy is coming clearer day after day. My hospital has actively introduced it, and it is favourably commented upon by the patients.”

The research on the heparin therapy is drawing the attention of the medical world.

Kim Il Bong

Pioneering New Phase of Treatment

WHEN I VISITED THE SU-songchon General Foodstuff Factory in Chongjin, North Hamgyong Province for news coverage, I heard the following story from Han Thong Yong, 65, general manager of the factory.

He said: I began to suffer from severe diabetes over 30 years ago. And the disease got more complicated with the trouble of bile duct stone 20 years ago. In February last I was told that there was a doctor good at treating hepatolithiasis in the North Hamgyong Provincial People's Hospital, and I had an operation by the doctor. Now I am completely free of diabetes as well as bile duct stone.

The general manager added that the doctor is PhD and Assoc. Prof Mun Chung Yong, deputy director in charge of technical affairs of the hospital.

With my occupational curiosity I went to the hospital to meet the doctor.

He was an ordinary man of rather small stature and build in his mid-forties, and he has

made a lot of achievements in the medical world. He developed a method of operating on hilar bile duct cancer, which was exclusive technology of only a few countries in the world, and pioneered a new phase of post-operation treatment of the cancer by employing a Koryo therapy. This is favourably commented upon by the relevant patients.

Ri I Gun, 65, a woman living in Rason, says, "I once gave up my life when I was diagnosed with hilar bile duct cancer (II). Then I was told of Dr Mun, and I had an operation by him at the hospital. Nearly ten years have passed since then, and I still enjoy my life in good health."

Ri Chol, 50, a worker at the Musan Mining Complex, says, "I had an operation for radical resection for hilar bile duct cancer (IIIb) in the hospital nine years ago. Before the operation my whole body was affected by jaundice, and I completely lost working ability. But I recovered ten days after the operation and became able to work again like

today."

It was 20 years ago that Mun began to work at the provincial people's hospital after graduating from Chongjin College of Medical Sciences. At that time the success rate of radical resection for hilar bile duct cancer was not high, and even though the operation was successful, the life span of the patient was limited to three or five years at the maximum. To overcome such shortcomings the doctor embarked on the road of research. Though he was busy with treatment he conducted different experiments in an effort to improve the method of operating on hilar bile duct. In particular, he intensified the research to use different Koryo medicines for post-operative treatment.

In January Juche 100 (2011) he established the method of diagnosing and operating on hilar bile duct cancer, and performed the first operation successfully. The post-operative treatment combined with Koryo medicines also proved very effective, and dozens of relevant patients he operated on are all still alive.

His clinical experience is described in his recent booklet *Hilar Bile Duct Cancer*. His success earned him a doctorate.

He is still very busy trying to solve problems such as lengthening relevant patients' life span after operation and maintaining the stability of life indexes.

He takes immense pride in his endeavour.

Kim Hyon Ju

Determination Leads to Success

RECENTLY THE RESEARCHERS OF THE Silicate Engineering Institute of the State Academy of Sciences have developed heat-resistant tempered glass. Heat resistance of glass is the property by which the glass is resistant to any serious change of temperature. In other words, heat-resistant glass is the one that can stand the temperature change of up to over 700°C and has the bending strength of more than 80MPa.

The glass is used to make high-temperature windows for observation, astronomical telescopes, high-temperature electric bulbs, infrared ray transmitting glass, ultraviolet ray intercepting glass and so on. Only a few countries in the world have been producing such glass. They choose an extremely limited number of persons to produce the glass in order to check the leaking of the relevant technology.

The abovementioned institute set a goal of developing such glass by relying on its own efforts and technology and formed a research team led by Kim Jong Su, head of the glass laboratory. The team did a chemical analysis of the glass, measured its density, bending strength and heat resistance, and studied scores of documents. They thus grasped the properties of the glass. After repeated experiments they managed to make a good heat-resistant crucible.

However, there were still not a few problems to solve. One of them was to ensure transparency of the glass. Whenever they melted glass, the test pieces of the glass lost transparency during crystallization treatment—like porcelain. Generally, microcrystalline glass contains crystals, so it is opaque. Though the researchers knew there were some kinds of special transparent microcrystalline glass, they were at a loss as they were unfamiliar with this kind of glass.



Kim says, "At that time some people doubted that we could make such glassware. But our conscience and self-respect as scientists did not allow us to think we were unable to make what others did."

The researchers repeated experiments. At last they got a sample of the heat-resistant tempered glass. They compared the technical indexes of a product from the pilot furnace with those of the glass produced in other countries for analysis. The result was completely successful.

Researcher Om Hyok says, "All other researchers of the institute congratulated us for the success, but we are not content with it. We will intensify the research so as to make heat-resistant tempered glass of an advanced level."

Ri Chun Guk, senior engineer of the heat-resistant tempered glass workshop of the Taean Friendship Glass Factory, says, "This time our researchers have developed the heat-resistant tempered glass in a little over two months without any basic data. Their success convinced us that we can do anything we are determined to."

Sim Chol Yong

Mun Chung Yong (right).





New Features of Pyongyang Metro

THE METRO IS ONE OF the main means of public transportation in Pyongyang,

capital city of the Democratic People's Republic of Korea. Some of its stations were opened

in 1973 for the first time, and the number of them increased with the formation of new streets and

► expansion of residential quarters in the capital city. Hundreds of thousands of people use the metro every day, or more on holidays and Sundays.

To the Korean people the metro is not only means of transportation but also a venue of ide-

ological and cultural education. The individual stations have large mosaic murals, sculptures and other kinds of artworks dedicated to the themes related to their names. They intensively reflect the course of development of the country.

artworks of new styles showing newly-built structures and the improving life of the people. The passengers say that they can learn the history of change of the country and its vibrant reality in the metro.

The walls of underground halls, linking corridors and escalator sections in Jonu Station are hung with eye-catching pictures of the improved Samjiyon City, Jungphyong Vegetable Greenhouse Farm, Yangdok Hot Spring Resort, Ryomyong Street and other new streets. And graceful illuminations and ceiling decorations add to the impressiveness of the pictures.

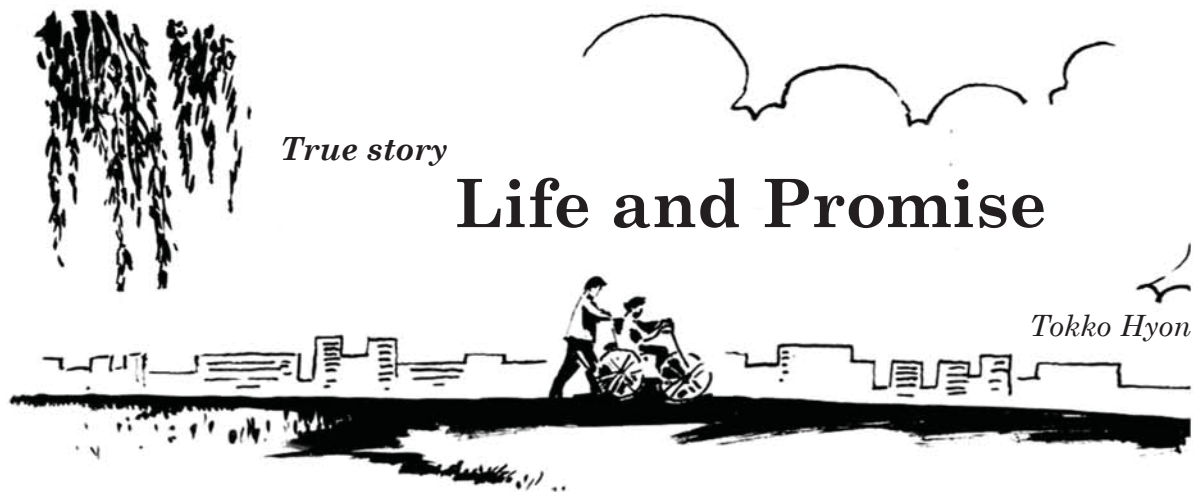
The country changes for the better not only on the ground but also underground year by year.

The Pyongyang Metro, which is called underground palace, greets people with new features of civilization.

*Article by Rim Ok
Photos by Ri Song Ik and
An Yong Chol*

Recently several stations have been spruced up with





True story

Life and Promise

Tokko Hyon

(Continued from the last issue)

AT THE MOMENT A WOMAN CAME OUT with a tray of dish in her hand, and when she saw Ho Kwang Ho, she exclaimed with her eyes wide open, “My goodness, that’s Kwang Ho, isn’t it?”

Kwang Ho recognized the second elder sister of Ki Chon’s.

“Hi,” he greeted.

“What a surprise!” the woman said. “Come in, please. We are celebrating Ki Chon’s wedding now.”

“Wedding?” Kwang Ho cried in surprise.

Guided by the woman, Kwang Ho went into a room, and his appearance added to the atmosphere of the wedding party.

Pak Ki Chon sprang up from the wedding table and came across to Kwang Ho to have an embrace. And other old middle school mates of Kwang Ho’s and the bridegroom’s parents were also too glad to let go of his hands.

The bridegroom took Kwang Ho to his side and introduced him to the bride, saying, “This is my childhood friend.”

The bride bowed to Kwang Ho deeply. Only then did Kwang Ho look attentively at the woman with a round face and soft eyes. He liked her. He then got a glance of the backdrop hanging on the wall behind the man and wife. Written on it were the names of the couple: Pak Ki Chon the Bridegroom and Pak Kil Sun the Bride. *Pak Ki Chon and Pak Kil Sun!* Kwang Ho told himself. *Good anyhow. He has got a good woman for his wife.*

A middle-aged man, who must have been hosting the ceremony, joyfully shouted, “Now it’s the turn of Ho Kwang Ho, a childhood friend of the bridegroom, and a Korean People’s Army officer. Clap your hands.”

Kwang Ho stood up with a smile. After offering his simple congratulations to the couple, he sang the song *My Song in the Trench* he had used to sing first at a recreation party in his unit. Then he invited the couple to sing a song together.

Amid applause Ki Chon stood up, but his wife would not rise, simply bending her head deeper. Blinking his eyes at Kwang Ho, Ki Chon asked for a guitar and skilfully played the music of a song on the guitar, drawing the attention of people around. Then he began to sing the song in a soft yet earnest voice as if he were gripped by the world of the song.

From the second verse of the song all the people present sang together in spite of themselves. After singing, they clapped their hands, saying, “It’s a really good song,” and “It’s good, and the bridegroom sang well.”

...

The wedding ceremony was over more than one hour later.

Kwang Ho soon came out with his old school mates and had a talk with them on one side of the yard. It was also quite long since he saw them last.

Meanwhile, under the bright light from windows of the apartments, there were boisterous farewells between the host family and the guests.

Talking with his friends, Kwang Ho came to know Ki Chon had been discharged from the army in the previous year and was now working at Chongjin Port. After seeing off all the guests, Ki Chon, in a shirt, walked up to his friends.

“Why don’t we school mates have another round? Do you agree, Kwang Ho?” asked Ki Chon.

“No, thank you. Your family must have had much trouble preparing the wedding ceremony,” Kwang Ho declined. Then, with an inquiring look, he asked Ki Chon, “Why are you alone? Where is your bride?”

Then Kwang Ho felt somebody tapping him on the side.

Though in darkness it was clear that Ki Chon looked awkward.

“Ah, she is feeling uncomfortable now,” Ki Chon murmured.

▶ “Really? But...” Kwang Ho could not finish his words. He felt the festive mood vanish. *I know the bride is tired,* He thought. *Yet it is morally natural for her to see off the guests who were here to congratulate them on their marriage.*

In an attempt to soothe Kwang Ho, Ki Chon, with a gentle smile, took him by the wrist, saying, “Kwang Ho, I ask you to join us again even if you are alone. We have lots of things to talk about after a long separation, you know.”

“No, thanks. I’ll be here again tomorrow morning,” said Kwang Ho.

After a while, they said good-bye. Having entered the sidewalk after going round the apartment, Kwang Ho asked Yong Thae walking by his side, “What’s the matter with Ki Chon’s bride?”

No one would give an answer—Kwang Ho could not tell why.

After a good while Yong Thae said reluctantly, “Ki Chon’s bride is crippled, Kwang Ho.”

“What? Crippled?” Kwang Ho asked in surprise. *Is that true?* He doubted. *She was good-looking and seemed good-natured. What then made Ki Chon marry her? His sympathy or some unavoidable circumstances?*

The next morning, after getting up, Kwang Ho could not still believe Ki Chon’s affairs at all, and was vacantly sunk in thought several times. Somehow he got sad and was out of sorts. So he did not go to Ki Chon’s home but visited his uncle, aunt and other relatives. Early the following morning he left by train.

Even in the ritual following the wedding ceremony, Ki Chon awaited Kwang Ho eagerly. At last, unable to control himself, Ki Chon went over to see Kwang Ho at his home. To his regret, Kwang Ho had already left.

“He left? When?” Ki Chon asked. He was very sorry. A simple note written by Kwang Ho was handed to Ki Chon. Written on the note looking like one of children’s paper cards was the question “What’s up?”

3

One evening about one month later the door of the room where Kwang Ho’s platoon headquarters was situated opened suddenly, and the second squad leader of a sturdy build jumped in with a broad smile.

“Platoon Leader, something’s happened for congratulation,” he reported.

“What?” asked Kwang Ho.

“Here is a registered letter for you, and it weighs as much as one kilogram,” replied the squad leader.

“A letter weighing one kilogram?” Kwang Ho echoed with a laugh.

“The messenger, too, said a letter as heavy as this one should be put on the Guinness Book of Records,” the squad leader joked, handing the enve-

lope to Kwang Ho, who found it unusually thick and heavy. Written on the envelope with four stamps pasted on it was the name Pak Ki Chon. Now Kwang Ho’s heart throbbed.

After the evening call, Kwang Ho began to read the letter in the quiet room of his headquarters.

Dear Kwang Ho,

How are you?

I miss you very much as we met and parted like the lightning. I wonder why you left like that, only leaving the question of “What’s up?” I don’t know why, but I am really sorry.

Kwang Ho, I heard you were quite surprised to know that my wife is in an unusual condition. Thanks for your care and concern for me.

But I did not marry her out of any sympathy or because of any unavoidable circumstances.

I happened to know her in the autumn of last year, that is, one Sunday just one year ago.

That day I went to work to repair a forklift, an urgent problem of my workteam. In the afternoon, on my way back home, I heard the glad news that a football match would be broadcast live on TV from three o’clock. You know I was crazy about football from the school days. Furthermore, the match was between the April 25 Sports Club and the Amnok-gang Sports Club.

But I knew it would be too late if I headed for my own home, so I decided to follow Un Sik, the youngest in my workteam, to a house in his neighbourhood.

We almost ran, and when we arrived at the destination it was fortunately five minutes to three. It was a cosy one-storey house.

“Hello, Kil Sun,” Un Sik called out, rushing into the house without knocking at the door. Feeling rather awkward, I followed him into the house. There was a young woman alone in the room. Probably she had been knitting something, for there were two balls of thread, which was as big as the table tennis ball, on the green blanket covering her legs. In one corner of the windowed wall was a television set.

Switching on the TV, Un Sik introduced me to the girl, saying, “This is my colleague, and he is here to see a football match.”

Feeling a bit awkward, I nodded to her. (She had a round face with gentle yet shrewd eyes.) She answered me with a nod politely, changing her position a little sideways. But she kept the blanket on her legs, and I thought it was to keep the thread balls there.

Soon there came a whistle sound from the TV to signal the beginning of the football match.

I was soon absorbed in the match. It was a see-saw game: Attack and defence; unexpected circumstances and painful sense of loss; heated argument and reproach at failure; and excitement at success...

(To be continued)

National Musical Instrument Makers



National musical instruments presented to the 10th Pyongyang Exhibition of Musical Instruments in October 2019.

THE RESEARCHERS OF THE NATIONAL Institute of Musical Instruments are carrying on techniques and methods of making national musical instruments. The national musical instruments of different kinds they presented to the 10th Pyongyang Exhibition of Musical Instruments held in October last year were awarded a diploma of Good Science and Technology. It was a unanimous comment of relevant experts and people present at the exhibition that all the instruments had a rich volume and high quality of sound.

Veteran Kayagum Maker

Kang Song Jin, chief of the stringed instrument laboratory of the institute, is an experienced *kayagum* maker well-versed in all sorts of national stringed instruments such as *oungum*, *okryugum* and *sohaegum*. From his childhood he had an unusual interest in woodwork. At that time it was his dream to make his wood works reflect profound human emotion and feelings and life.

After graduating from college he became a national musical instrument researcher in Juche 86 (1997) as he wished, and put his heart and soul into making musical instruments that could reflect the emotion and soul of the nation as he had dreamed in his childhood. His untiring research bore fruit after a dozen years. In September 2013 his *kayagum* and *oungum* won a prize for the first time in his life at the 7th Pyongyang Exhibition of Musical Instruments. Later, he wrote some theses on quality improvement of national musical instruments, and developed new techniques of making the nut and bridge of *kayagum*.

In October 2017 his technique of making

kayagum was registered as No. 65 on the list of national intangible cultural heritage.

Now he is engrossed in the research for a modulating *kayagum* to be used in the orchestra where tonality changes from time to time. His instruments give soft and gentle sounds with a unique national tone. They are in great favour in professional art troupes such as the Phibada Opera Troupe and the National Folk Art Troupe.

Like Father, Like Son

There is a proverb "Like father, like son," and it seems to go for Kim Myong Nam, chief of the wind instrument laboratory of the institute.

His father Kim Jae Hyon, 83, is a well-known woodwind instrument maker in the country. He worked at the Pyongyang National Musical Instruments Factory for over 60 years since 1954. During the career he made a great contribution to carrying on and developing traditional techniques of making woodwind instruments. As a Merited Maker, he won a lot of diplomas and medals at different domestic exhibitions.

Myong Nam grew up while learning the technology and knack of making woodwind instruments from his father. With an ambition to become a renowned musical instrument maker like his father he strived to master the relevant techniques. His painstaking effort and the strict guidance of his father brought him prominence in making woodwind instruments.

In September 2013 he presented a tenor *jodae* (a Korean flute) to the 7th Pyongyang Exhibition of Musical Instruments, winning a technical prize. Afterwards, he mastered and further developed

▶ the technique of making different kinds of woodwind instruments such as *jodae*, *saenap* (a Korean brass wind instrument) and *jangsaenap*. His technique of making *jodae* and *saenap* was officially put on the list of national intangible cultural heritage in 2017.

He also gained some successes in modernizing woodwind instruments. In September 2019 he received a certificate of new idea by making a plas-

tic-button *tanso* (a kind of bamboo flute) and made public the thesis *Study on Improvement of Thung-so*, thus drawing the attention of experts.

At present his son Kim Nam Yong is learning to play the tenor *jodae* in the music circle of his school. The boy also intends to become a woodwind instrument maker. It is his dream to live up to the idea of "Like father, like son."

Kim So Yong

National musical instruments made by the researchers are serviceable items for training instrumentalists.



Ryongchon County Today

RYONGCHON COUNTY IN NORTHWEST North Phyongan Province used to be engaged in rice farming alone. Now it has changed into a locality good to live in provided with industrial factories fed with locally-available raw materials, a fishing station, scores of educational institutions at different levels, and medical facilities. The local people are striving to better their life.

Changed Land

All residents of the county say the history of its change is just that of irrigation. The county has

sufficient water resources: The Amnok River flows northeast to southwest to its west; and the Samgyo Stream flows east to west to its north. It also has several small and large streams such as Ssangryong, Ryongsan and Rimphyong.

It was during the Amnok River irrigation project in the late 1950s that a new history of irrigation started in the county under the concern of the State. *Let's develop our land by our own hands*—this was the unanimous will of the local residents. The increased State investment added to their zeal. They constructed the Maebong Reservoir and scores of pumping stations in three years. Later, ▶



On the way to work.

Efforts are channeled into land and environmental protection.



▶ they pushed ahead with the project, establishing a rotational irrigation system over thousands of hectares of fields in the Ryongchon Plain.

The completion of the Paengma-Cholsan Waterway in 2005 led to the expansion of the area under irrigation by thousands of hectares. Thus all fields in the plain were fully irrigated. Besides, the construction of reservoirs and a gravitational waterway transformed the landscape of the locality completely. And many power production bases, fish farms and recreation centres appeared in the county. A lot of tourists visit the county to see the extensive gravitational waterway network.

Land and Environment under Good Protection

The county is also striving to keep the land and environment in good conditions. A huge land realignment project was done there 20 years ago. The local residents and builders from across the country pooled their efforts, and thus rezoned over 50 000 patches of paddy and straightened 4 000 kilometre-long curved ridges in paddy fields in less than a year. All dry and paddy fields in the county changed into standardized ones, and a large area of new land was brought under the plough.

In the new century the county has been making more strenuous efforts to harness nature and protect ecological environment. In 2012 it conducted the stone covering of the bank of the Samgyo Stream, and dredged the Tongsin Stream off its bank. From April to June last it carried out the work for the protection of the Amnok River bank, ▶



built a road leading to reclaimed tideland, and constructed a road between Tongha-ri and Inhung-ri.

The county attaches foremost importance to forest conservation. When the country started a forest restoration campaign in 2015, the county created a new tree nursery in a short span of time and produced hundreds of thousands of saplings of good species annually. This enabled the county to finish its forest restoration project by 2017.

Song Yun Bok, manager of the County Forest Management Station, says, "We are planning to turn all the mountains in the county into orchards by producing a lot of wild vine, tara vine and other wild fruit tree saplings in the coming five years."

Zeal for National Sports Runs High

The county is famous for being good at national sports. It won national sports events of different sports meetings including the events of seesawing and swinging of the 9th National Agricultural Workers' Folk Sports Meeting held in 2012. Especially, its *ssirum* (Korean wrestling) players are counted as the best across the country.

Sinam-ri is a good example. *Ssirum* is so popular in the ri that it is not too much to say that those who do not know to do *ssirum* are ineligible for the

residency in the ri. It has produced a dozen *ssirum* aces such as Kim Hyang Bong, Rim Tae Myong and Ri Jong Chol who is held in public affection. Ri took part in various *ssirum* contests, winning over ten bulls for prize along with more than 150 medals. And he has trained 100-odd reserve *ssirum* wrestlers.

The *ssirum* training is given widely in keeping with the popularization of the sport. Ryongchon County Hero Sinam Senior Middle School in the seat of the ri makes the instruction serve as a course for its students to develop their physical strength and cultivate love for the nation. The school has a record of winning 45 consecutive victories in the *ssirum* event of the national schoolchildren's sports meeting.

Today it is a commonplace to see people engrossed in *ssirum* matches on holidays and Sundays and during breaks or spare time not only in the ri but also anywhere else in the county. This helps them recover from fatigue and promote harmony.

Amid the growing zeal for national sports, the local people are feeling pride in their working life and devotedly working to better their county.

Article by Kim Son Myong

Photos by Ra Phyong Ryol

Wrestlers from Sinam-ri.



Environmental Protection— Primary Concern

RECENTLY THE DEMOCRATIC People's Republic of Korea has put in a lot of effort to protect environment. Thus the area of forests has increased, while the cultural and sanitary environment of industrial establishments is improving considerably. The Pyongyang General Electric Cable Factory 326 in Phyongchon District, Pyongyang, is one of those spearheading environmental protection. The factory was awarded a DPRK certificate of environmental management system for its having long protected environment well.

All its workshops are clean and provided with favourable conditions to increase the rate of operation of equipment, normalize production and raise the quality of products, and thus the factory overfulfills its plan year after year. The green area of over 7 000 m² between production buildings and auxiliary buildings is thickly covered with various species of trees such as apricot tree, cherry tree and metasequoia. And rose and other flowering plants grow in flower beds. It seems that the factory is in a large park.

"Environmental protection is not merely economic and technical work. It is a responsible and important undertaking for the health and future of people," says Kim Sok Nam, general manager of the factory.

Over the years the factory has pushed ahead with the effort to improve the hygienic and cultured standard, and provided its workers with a good working environment. Now it is invariably endeavouring to protect environment. Dust collectors and ventilation devices in workshops are routinely checked on a weekly

and monthly basis so as to correct any defects in time.

Jong Song Il, leader of the rolling workteam, says, "In accordance with our annual work plan we removed the old-fashioned dust collector and made and installed a new water spray-type one which makes it possible to raise the dust-collecting rate over 90%." According to him, the factory regularly examines the maintenance of environmental equipment of workshops to take necessary measures, and the sheet metal processing workteam of the maintenance workshop repaired and readjusted the return water pump of a dust collector of a forge and introduced a new technique, raising the rate of dust collection 98%.

The insulation workshop of the factory made and installed a new cooling-water basin for the plastic extruder, thus making it possible to protect the place from the pollution by hydrochloric gas. Especially, it is raising the efficiency of the dust collector of

the boiler by repairing and improving it in time.

Pumps are operated on a normal basis so as to purify and recycle the water used for operating dust collectors, thus reducing water consumption and pollution as much as possible. Besides, the factory has installed oil separators to purify waste water from the recuperation house and the Munmyong House under its control.

It is also recycling waste copper, waste aluminum and waste plastic from production, making it possible to save raw materials by 30% and increase the production.

Kim Kyong Hwa, warehouse worker, says, "We are benefiting from the green roof as well. The area of green roof is more than 100m². It provides fresh air in summer and prevents heat release in winter. Different kinds of vegetables and fruits from the green-roof farming are supplied to the workers."

Pak Yong Il

The factory compound is kept tidy.





Ri Yong Chol.

Traditional Principles of Korean Cuisine

als, the negative indicates animal materials, and the positive vegetable ones. The principle of harmony of the negative and the positive means the one whereby cooking is done by appropriately combining animal and vegetable materials so as to provide the matched tastes of foodstuffs and favourable effect on the human body.

In Korean dishes over 70% of subsidiary foodstuffs is the combination of animal materials such as meat and fish and vegetable materials such as greens, edible wild herbs and seaweed. For example, putting radish into beef soup or broth makes it sweet and savoury with meat done well. And mushroom blends well with chicken soup, and when parsley is put in the dish made with fish such as mackerel and yellowtail, it removes fishy smell, stimulates appetite and prevents food poisoning by dint

of its own aroma and sterilizing function.

Like this the Korean people combined animal and vegetable materials appropriately to create dishes of distinctive tastes, and developed the Korean-style food culture.

The second is to create five tastes, that is, the sour, pungent, bitter, sweet and salty tastes.

The salty and sour tastes, the sour and bitter tastes, the bitter and sweet tastes, the sweet and pungent tastes, and the pungent and salty tastes correlate and supplement each other, creating the unique tastes of dishes.

From of old the Korean people, through cooking practice, observation and study, found out that those five tastes are related to man's heart, liver, lungs, kidney and spleen. An old book tells: Too bitter taste harms the lungs; too pungent taste harms the liver; too salty taste harms

▶ the heart; too sour taste harms the spleen; and too sweet taste harms the kidney.

Typical dishes prepared on the principle are kimchi and pickled fish. Kimchi with a delicate combination of salty and sour tastes, and pickled fish with a delicate combination of pungent and salty tastes stimulate appetite.

The third is mutual exclusiveness of the five tastes, which means creating savoury tastes by using the way the tastes check one another.

Through their long dietary life the Korean people understood the principle that the bitter taste is checked by the pungent, the pungent by the sour, the sour by the sweet, the sweet by the salty and the salty by the sour respectively. On the basis of the principle they made different dishes.

Typical of them are soy and bean paste of Korea. The condiments are indispensable to the Korean people's dietary life. They are made by crumbling well-fermented soybean lumps to be put in a jar or pot, and pouring saline water in it for maturing of the content. In the course of maturing, different kinds of saccharide such as glucose and polysaccharide, and acid substances come into being. However, the sour taste is restrained by the sweet, the sweet by the salty, and the salty by the sour respectively, thus creating savoury soy and bean paste.

The fourth is to supplement the nutrition of the internal organs with similar materials. The Korean people came to know that a certain weak organ in the human body can get well by taking the dish made with a similar organ of animals. So they ate dishes made with the

lungs, heart and liver of animals in order to nourish theirs. Still, different kinds of such dishes are put on the table including seasoned sliced raw cow liver, sliced cow liver sauté, seasoned raw stomach, and grilled heart.

The fifth is that too much good things bring about adverse effects. In other words, the use of too much tasty materials or condiments harms the body, but an

appropriate amount of them protects the organs and promotes health.

These cooking principles held fast to by the Korean ancestors are being carried on now, enriching the nation's cuisine and actively promoting the people's health.

Ri Yong Chol, department head of the Central Committee of the Korea Cooks Association

KOREA HAS THE PHRASE "yaksikdongwon" meaning that medicine and food are of the same origin, so medicine is just food, and vice versa.

From olden times the Korean people applied it in cooking. In the course of this they found out and developed different principles of cooking suited to their physical constitutions and tastes, and helpful to good health and longevity. Here go some typical principles of Korean cuisine.

The first is the harmony of the negative and the positive.

In terms of cooking materi-

Ginger Tea

FROM OF OLD THE KOREAN PEOPLE used ginger as both spice and medicinal material. In particular, they were fond of drinking ginger tea in the scorching season of summer.

1. Ginger and Orange Peel Tea

The tea warms the spleen and the stomach, and removes cold-evil. It helps the spleen, stomach, small intestine, large intestine and bladder work properly, and invigorate the weak spleen. The tea also helps cure the pain from a bloated belly, nausea, vomiting, phlegm retention syndrome and coughing.

2. Black Ginger Tea

It helps warm the stomach, cure vomiting and improve vitality. It also helps invigorate the spleen and the stomach, remove fatigue and retard aging, and acts as antiphlogistic and diuretic. Brew the black tea leaves and ginger in the teapot before adding an appropriate amount of brown sugar. □

The method of preparing the tea is as follows: Put orange peels and ginger into the teapot to brew before adding an appropriate amount of brown sugar to drink.



Traditional kimchi making.



Traditional soy sauce and paste making.

Beef Barbecue of Korea

ONE OF THE DISHES TYPICAL OF KOREAN cuisine is barbecue. Especially, seasoned beef grilled over a charcoal fire is known to the world as one of the Korean people's three favourite dishes.

Maekjok, Origin of Korean Barbecue

The Korean roast meat is different from roasted dishes of other countries. The Korean people season meat mainly with garlic and sesame oil before roasting the meat. Such a method of cooking was widely used in the period of Koguryo (277 BC–AD 668). The dish prepared by this method was called *maekjok*, and it was also known to neighbouring countries.

It is recorded in a Chinese legendary book compiled in the period of the Jin dynasty (265–420) that from ancient times they worshipped *maekjok* in China, so it was always served at important feasts given by aristocrats or the rich.

Maek means the tribe of Ancient Joseon who founded the Koguryo dynasty, and *maejok* means

the roast meat prepared by the tribe for their food. *Maekjok* is seasoned skewered meat roasted over a fire. For the meat they used beef, pork and poultry, and beef was counted as the best.

Solyajok, Speciality of Koryo

Beef barbecue of Korea further developed in the period of Koryo (918–1392), the successor to Koguryo.

The following is recorded in *Haedongjukji*, a historical book of Korea: *Solyajok* has long been a speciality of Kaesong (capital city of Koryo). The method of cooking the dish is as follows: Season the ribs or heart of the cow with oil, garlic, ginger and so on and roast them. When they are half done, put them in cold water for a moment and roast them again over a strong charcoal fire. They are good to eat over the wine on a snow-falling winter night, and they are very soft and tasty.

The word *solyajok* originated from the meaning that it is roast meat to eat on a snowy winter night. Its cooking method is as follows:

Slice beef and tap the meat with the back of a knife to tenderize it. Stick the meat on bamboo spits and season it. When the meat is fully seasoned, roast it over a charcoal fire.

The cooking method further developed with the passage of time. Roast meat is quickly put in water once, and roasted again. The process is repeated three times before spreading cooking oil over the meat and roasting it once more. This makes the meat softer and tastier.

In the period of the feudal Joseon dynasty (1392–1910) not only the cooking method but also the relevant tools developed further. In the 19th century the use of grills to roast meat was introduced across the country. At that time various methods were employed to roast meat, including that of roasting meat on a grill or a spit over a charcoal fire. But there was something common in the methods. It was the way meat was seasoned before roasting. This was the distinctiveness of the Korean-style barbecue.

Tradition of National Cuisine Carried on

It is in a restaurant on the third floor of Daesong Department Store in Taedonggang District, Pyongyang that you can eat the most distinctive beef bar-

becue of Korea. Kim Sok, head cook of the restaurant, is outstanding at preparing beef barbecue, so he is called master cook of beef barbecue by his colleagues and customers. The nickname is associated with his painstaking effort of 30-odd years dedicated to improving the nutritive value of the dish, and making it retain its unique taste.

By using a traditional method of processing the meat of cattle bred by a native method he prepares the dish to retain its unique taste. And he employs various tools such as a slab of stone, a sheet of iron and a grill. He also properly combines different materials and seasonings and spices such as pear juice, ginger juice and pepper powder to make the beefsteak spicier and tastier.

The dish prepared by the head cook fully satisfies the demand of the customers who say, "Dishes should be good to see and eat and be healthy."

Ri Yon Hui, a resident in Tongdaewon District, Pyongyang, says, "I was born in Kubinri, Kangdong County, Pyongyang, which is famous for its stockbreeding. So I liked meat, especially beef barbecue, from my childhood. Whenever I feel like having beef barbecue, I come to this restaurant. Beefsteak prepared by Kim is always delicious, and it makes me nostalgic."

Kim has received a dozen diplomas and medals at a number of cooking festivals and contests by presenting beef and other barbecues. In April Juche 104 (2015) he was awarded the title of Master of Barbecue.

He plans to initiate cooks from across the country, as well as those of his restaurant, into the traditional method of cooking beef barbecue. Now he is striving to diversify and enrich the food culture of his nation.

Choe Sol Mi

Yang Sa On's Tour of Mt Kumgang

YANG SA ON (1517–1584) WAS A WRITER AND CALLIGRAPHER. He passed the state civil service examination and was promoted to Magistrate of Anbyon. But without much interest in government service, he studied while touring spots of scenic beauty and historic interest.

He loved Mt Kumgang very much. Hence he adopted his pen name of Pongnae, which was another name of the mountain.

Between Janggundae and Ryonhwadae in the Lagoon Samil area of Mt Kumgang there is a rocky hill that commands a general view of the lagoon. The hill is called Pongnaedae because Yang studied there. Below the hill is Pongnae Cave in which it is said he studied while seeing the picturesque scenery of the lagoon.

Besides, Mt Kumgang has lots of legends and episodes about Yang, including *Legend of Piraejong*.

While working as the Magistrate of Anbyon, Yang heard that Kosong Hot Spring was good, and set out on a tour of Mt Kumgang. In Thongchon he went sightseeing to Chongsokjong before reaching Onjong-ri in Kosong via Onchon.

Having come a long way on horseback, Yang was thirsty.

Dismounting from his horse, he went to a well where a young girl was scooping water into her jar, and asked her for water.

The modest girl with pretty features made a polite bow, scooped water with a gourd, picked a handful of leaves from a weeping willow at the well and put them in the water of the gourd before offering it.

Yang felt suspicious and angry. He, however, was so thirsty that he, blowing off the willow leaves, drank all the water. Then he asked the girl why she had put in the leaves. With glowing cheeks, she replied, "I was afraid that you might have trouble if you drank water hastily."

Yang slapped his knee, saying in admiration, "People of Mt Kumgang are as perfect as its scenery."

After touring the mountain, he left the following poem.

*Does the earth come from the sky
As there is a mountain above a mountain?
The sky is in the middle of the water
As streams flow side by side.
This body is flying in extensive space,
And it is neither smoke nor mist nor spirit.
I hear all people in this world
Wish to live in Koryo.
Now touring Mt Kumgang,
I know the peaks here are all beads.*

Yang was also counted as one of the three noted calligraphers in the period of the feudal Joseon dynasty, and his calligraphy can be seen in celebrated mountains and scenic spots like Mt Kumgang and Mt Myohyang.

Rim Ok

Head cook Kim Sok.



MT MYOHYANG (4)

Scenic Spots in the Area of Hyangbiro Peak

YOU CAN SAY THAT YOU HAVE ENJOYED all the scenery of Mt Myohyang only after climbing up Hyangbiro Peak past Paegun Rock.

Hyangbiro Peak, 1 909 metres above sea level, is the highest one in Mt Myohyang. The Korean ancestors called the highest peak Piro Peak, hence the name of Hyangbiro Peak.

The top of the peak consists of rocks and flat grassland. Various flowers are in full bloom on the grassland in July and August, not in spring because of low temperature. While it is early summer down on the shores of the Myohyang Stream, it is spring on the top of Hyangbiro Peak.

Dwarf Siberian pine trees cover a wide area be-

tween Hyangbiro Peak and Chilsong Peak to the southeast. Hyangbiro Peak commands a panoramic view of a chain of mountain peaks, high and low mountains and plains in Nyongbyon, Pakchon and Anju areas, and the West Sea of Korea far away.

Along the mountain-climbing route to Hyangbiro Peak and in the vicinities there are many scenic spots: Chonthae Valley famous for its waterfalls; a resting place at Hyangbiro Gate, the entrance to the climbing route to Chilsongdong Valley and Hyangbiro Peak; a place where you can see three scenic beauties—crystal-clear water, fragrant thick forests and peculiar rocks; the ancient Habiro Hermitage; Kungang Hermitage; Poryon Rock; Kangson Rock; a spring called Myongansu; Chonthae Falls and Isonnam Falls in Chonthae Valley;

▶ another resting place halfway on the way to Hyangbiro Peak; Paegun Rock; and different waterfalls and pools in Chilsongdong Valley.

Paegun Rock, in particular, is known as a famous observation platform. The rock towers above the forest with white clouds girdling its waist, from which came its name, and commands a bird's-eye view of the chain of peaks of Mt Myohyang. The place, fragrant with the smell of cypress, overlooks almost all valleys and peaks such as Sangwon Valley and Manphok Valley along the Myohyang Stream. To the north you can see peaks made up of rocks of fantastic shapes such as Wonman Peak and Sokka Peak and to the south peaks resembling hundreds of running horses.

So there is an old saying that dissuades people from commenting on the scenery of Mt Myohyang unless they climb Paegun Rock. In particular, when white clouds rise up the ravines, the latter disappear into the clouds excepting high cliffs and peaks soaring over the clouds. From the rock you can also get a view of the autumn scenery of Mt Myohyang

dressed up with red and yellow leaves. For this reason, this scenery was counted as one of the “eight beautiful views of Mt Myohyang.”

Sollyong Rock is also one of the famous rocks in the mountain. Its gigantic and fantastic shape goes well with the surrounding scenery to present a superb view. As it stands on a high place, it has long been known as a noted place. Originally there was a temple called Sollyongdae, hence the name. The view of clouds girdling the rock is designated as one of the “eight beautiful views of Mt Myohyang.”

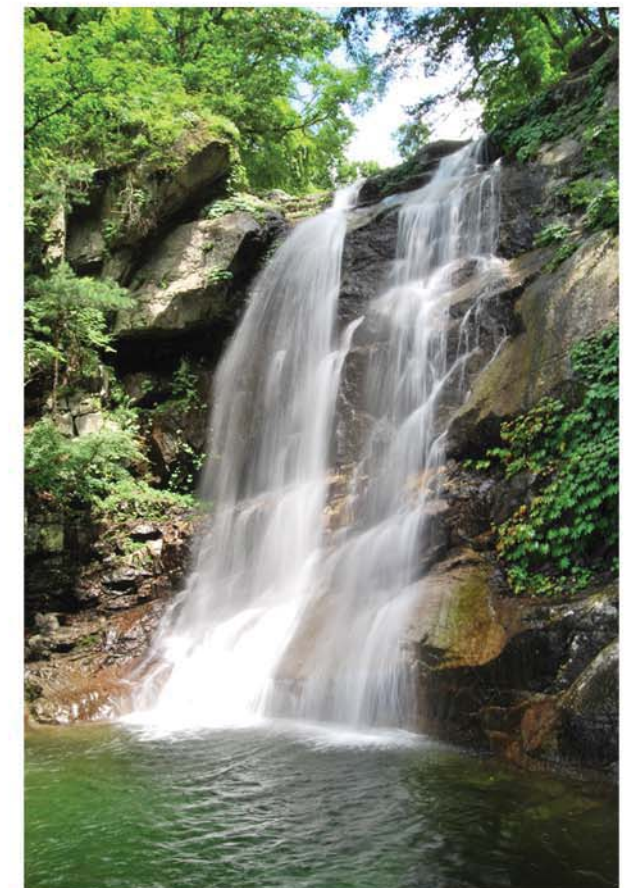
And in the area of Outer Hyangsan (Kujang area) there are the Ryongmun and Paengnyong caverns. These caves came into being as the underground layers of limestone had been dissolved and washed by rainwater and underground water for a long time. For the numerous stalactites and stalagmites of myriad shapes, the caves are well known as wonderful underground scenic spots.

Pak Yong Il

A sight of Habiro Valley.



Isonnam Falls.





Pigyokjinchonroe, First Time Bomb in the World

PIGYOKJINCHONROE was made by Ri Jang Son, a weapons technician, during the feudal Joseon dynasty (1392–1910).

When the Imjin Patriotic War (1592–1598) broke out with the invasion of Korea by Japan Ri put his heart and soul into inventing a new powder weapon. Thus he succeeded in making the weapon *pigyokjinchonroe* in several months.

The weapon was first used in the battle to retake Kyongju Fortress in September 1592. The following is a record of the battle.

“On the evening of September 7 the Korean troops secretly approached the fortress wall and fired *pigyokjinchonroe* into the middle of the yard of an inn where the enemy troops were stationed. With no idea of what it was, the enemy gathered round the cannon-ball touching or rolling it, and at that moment it suddenly exploded killing many of them. The sur-

vivors trembled thinking it was a work of demon. Then the Korean troops began to charge into the fortress all at once. Seized with panic, the enemy hastily began to flee with no courage to face them. In the battle the Korean troops wiped out the enemy’s manpower a lot, retook the fortress and captured lots of weapons and combat equipment and 10 000 *som* of military provisions (A *som* is equivalent to 5. 12 US bushels). The weapon played an important role in attacking the foreign aggressors during the war.”

The explosion of the cannon-ball was like thunder and shook the earth, so it was called *pijinchonroe* or *jichonroe*.

Cast in iron, the cannon-ball had a small hole through which black powder was put inside. A fuse was installed round the ball and it was filled with caltrops. Then the hole was covered with an iron lid, and a screw box was connected to the lid. The screw box was to

be fixed with two screw holders with ten and 15 grooves respectively. A fuse was stuffed in each of the grooves. So the cannon-ball was to be fixed with the screw holder with ten grooves for the bomb to explode soon after being fired or the one with 15 grooves for it to explode a while after being fired.

The cannon-ball was fired by means of different cannons. And its distance of flight was 750-900m.

No cannon-ball with a fuse like *pigyokjinchonroe* could be seen in other countries at that time.

Commenting on *pigyokjinchonroe* a Japanese ordnance scientist said: What is ingenious about this bomb is its fuse. It must be something startling at that time (the Imjin Patriotic War).

As the first kind of time bomb *pigyokjinchonroe* left a remarkable page in the world history of guns.

Kim Hyon Ju

Constitutional Revision—For What?

RECENTLY HUNDREDS of thousands of Japanese people put their signature against the proposed constitutional revision which is aimed at stipulating the existence of the “Self-defense Forces.” It is said that the people actively turned out in the signature campaign though it was extremely hard to go out owing to the spread of the COVID-19 infection. This is an expression of indignation against the present Japanese government hell-bent on trying to revise the constitution for the worse, and a reflection of the Japanese people’s strong desire to avoid being drawn into a tragic war any longer.

Japanese Prime Minister Abe is trying hard to realize at any cost the revision of the constitution, which he regards as his lifetime political goal, in the remaining few years of his term. He is wild about giving publicity to the “validity” of the constitutional revision, saying, “There is no change at all in my intention to realize it by myself at any cost,” “Let’s put an end to the dispute over the constitution by stipulating the existence of the Self-defense Forces in it,” and “We should create an environment in which the SDF members can act in high spirits.”

Describing the revision of the constitution as the major policy and historic mission of the Liberal Democratic Party, he is egging the LDP onto the constitutional revision, and pressing the Diet to push ahead with it.

The Abe clique’s scheme to

revise the constitution at any cost is an extremely dangerous act essentially aimed at perfecting the legal basis for the militarization of Japan and overseas expansion so as to turn the country into a nation capable of going to war.

The society of Japan is rapidly turning militaristic. The ruling class makes it a routine to visit the Yasukuni Shrine, and has made the society fascist by reshuffling the legal system, for example, manufacturing a special secret protection law and revising the organized crime punishment law for the worse. They fabricated a security law, an emergency law and a special anti-terrorism law, thus creating legal and institutional guarantees for the SDF’s military action in a wider area of the Asia-Pacific region.

With the annual increase of war expenditure the modernization of the SDF’s military equipment is being accelerated on a full scale. On June 12 last the SDF Air Force staff chief said at a press interview that improved Patriot missiles were deployed in four bases in Chiba, Shizuoka and Fukuoka prefectures.

They are plotting to push ahead with the renovation of radar sets and launchers of SDF units in various places successively.

Since its defeat Japan has pushed ahead with moves for its conversion into a military power and thus virtually completed the preparation for reinvasion in all aspects. What still remains to do

is merely to fabricate a war constitution so as to turn it into a “country that can have an army” and a “country that can go to war.” If it is realized, the Japanese reactionaries believe, their country will be able to legalize its overseas invasion, and, in case of emergency, fully mobilize its manpower and material resources to carry out a war.

Japan is dreaming a silly dream of going to aggressive war once again in an attempt to realize the old dream of the “Greater East Asia Co-prosperity Sphere,” the wild ambition for world supremacy.

The existing constitution of Japan represents a legal pledge by which the country declared to the international community that as a nation defeated in the Second World War it would follow the road to eternal peace alone without taking the one of militarization and overseas invasion again.

If Japan stubbornly revises the constitution, it will mean nothing but that the country itself becomes a common enemy of humanity.

History shows that those who went against the desire of humanity to live in peace were doomed to destruction without exception.

Japan is well advised to bear in mind that it is entirely thanks to its peace constitution that it has been getting on with the Asia-Pacific region filled with grudge and hatred against it, and behave prudently.

Yom Song Hui

Customs for 24 Divisions of Year

THE CUSTOMS FOR THE 24 DIVISIONS of the year in the lunar calendar are the social conventions and working life customs to be observed in different seasons according to the 24 divisions of the orbit along which the earth goes round the sun.

The customs have long been handed down in Korea.

The 24 divisions were each fixed on the basis of the vernal point to denote the moment when the longitude of the sun varies 15 degrees, and thus each of the divisions comes round in 15 or 16 days along with certain climatic features.

According to the 24 divisions the Korean people did farming at the right time while holding different ceremonies or having a good time making and eating different foods or playing folk games according to seasons.

The 24 divisions are: Ripchun, the beginning of spring; Usu, the first rainfall of the year; Kyongchip, the end of hibernation; Chunbun, the Spring Equinox; Chongmyong, April 5th or 6th; Kogu, the rainfall for seeding; Ripha, the first day of summer; Soman, the 21st of May; Mangjong, the barley harvest season; Haji, the summer solstice; Soso, the beginning of the summer heat; Taeso, the midsummer day; Ripchu, the first day of autumn; Choso, the period at the end of summer; Paengno, the first dew of the year; Chubun, the Autumn Equinox; Hanno, cold dew; Sanggang, the frost falling; Riptong, the beginning of winter; Sosol, the light snowfall; Taesol, the heavy snowfall; Tongji, the winter solstice; Sohan, the beginning of the severest cold; and Taehan, the height of the winter cold.

Typical of the divisions are Ripchun in spring, Mangjong in summer, Chubun in autumn and Tongji in winter.

Ripchun this year fell on February 4.

The Korean people greeted the day in a particular way: All families cleaned the interior and exterior of their houses, and greeted the new spring. And they enjoyed vernal fragrance, relishing fresh wild vegetables or those grown in a pit.

Mangjong this year fell on June 5.

Mangjong means that barley is harvested followed by the transplantation of rice seedlings.

In the old days the division was regarded as the favourable period for barley harvest and rice seedling transplantation.

Korean proverbs go, "Barley has ripened enough to be eaten, and rice seedlings have grown enough to be transplanted, so it's Mang-

jong," and "Cut barley before Mangjong," and the proverbs came into being because barley often falls in wind after Mangjong.

In that period seeds were sown for the last time, and barley was gathered and threshed.

In the season there took place folk games such as swinging and masque play.

Chubun means the period when autumn is well on without the atmosphere of summer at all.

Chubun this year falls on September 22.

Day and night are of equal length on the day.

Night lengthens and day gradually shortens after the day. This was followed by rice harvest and the gathering of dry field crops like bean, foxtail millet and sorghum. In the season the Korean people ate *songphyon* (a half-moon-shaped rice cake stuffed with beans and flavoured with pine needles), *solgittok* (steamed rice cake), *nochi* (fried cake made of steamed glutinous rice, millet or glutinous foxtail millet fermented in malt) and other cakes, and *pamdanja* (an egg-shaped glutinous rice cake covered with a mixture of boiled chestnut flour and honey), and they were fond of eating chestnuts and jujubes.

In the period they also prepared vegetables for the coming winter: They gathered and dried wild vegetables such as lance asiabell roots, broad bellflower roots, aralia shoots, fern, bracken and aster as well as perilla leaves, pumpkin vine sprouts and sweet potato sprouts.

In the season they played many folk games such as *ssirum* (Korean wrestling) and tug of war. In particular *ssirum* took place across the country with a bull as the prize.

Tongji means winter solstice, and it falls on December 21 this year. It is the day of the year with the fewest hours of daylight unlike Haji.

On the day the Korean people take gruel made of adzuki beans with bird's-egg-shaped sorghum or glutinous rice balls in it. The gruel symbolizes the winter solstice.

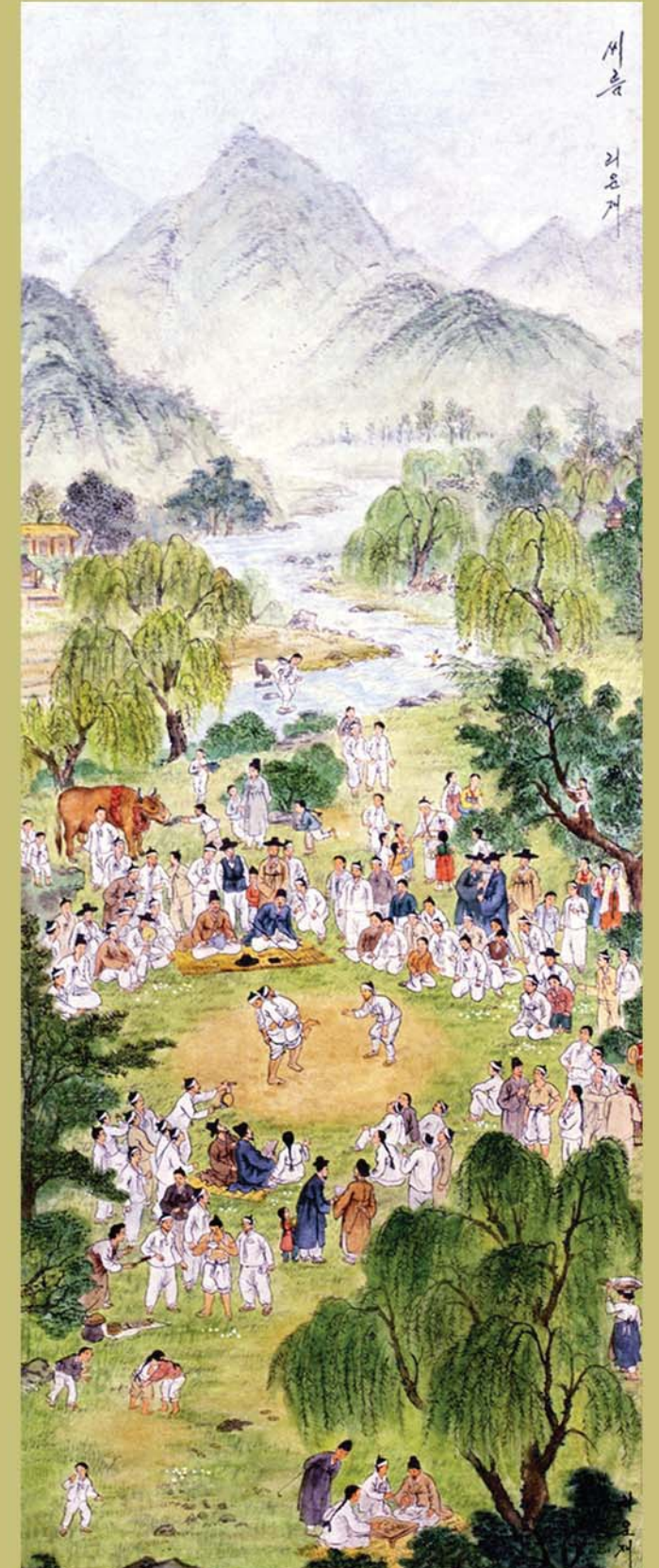
The typical folk game played in the period is the snowball game.

In the period the Korean people prepared for farming of the next year. For example, they made or repaired farm implements.

Days are now counted according to the solar calendar in Korea but the people habitually observe customs for the 24 divisions of the year in the lunar calendar.

The customs associated with the wisdom of the Korean people are registered on the list of the national intangible cultural heritage.

Rim Ok





БЕЛОРУССКАЯ СІМ'Я

СІМ'Я

