



KOREA TODAY

3
Juche 106
(2017)



Poster "Let us accelerate the victorious advance of socialism with the great spirit of self-reliance and self-development as the dynamic force!"



C O N T E N T S

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Supreme Leader Kim Jong Un is providing wise guidance for the women's movement in Korea, training all of them as heroines of the times.



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Advance of Socialism



Monthly journal *Korea Today* is printed in English, Russian and Chinese, and posted on the Internet site *Naenara* in English, Russian, Chinese, French, Spanish and Arabic.



Front Cover: Moving into a new dormitory at the Pyongyang Kim Jong Suk Silk Mill

Photo by courtesy of the KCNA



Back Cover: The newly built workers' dormitory at the Pyongyang Kim Jong Suk Silk Mill

Photo by Ra Jin Hyok

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Fatherly Care for Women

FROM OF OLD THEY SAID that women live a life for their family and children. The saying that only the life dedicated to the welfare of children leaves no regret reflects women's peculiar view of life that has been cemented through centuries.

As far as the Korean women are concerned, they have keenly experienced that their destiny and future and that of their family and children will be secure only when they have their genuine country. So they are devoting their all to the endeavour for defence of socialism and prosperity of the country, cherishing the patriotic idea of preparing themselves as roots in supporting the country. And it is attributable to Supreme Leader Kim Jong Un who shows great trust in and care for women regarding them as the force turning one of the two wheels of the revolutionary chariot. Following are some of the

stories about it.

Research Institute for Women

In June 2012 Kim Jong Un visited the Breast Tumour Institute under construction. Entering the interior of the institute which was near completion, he said that Chairman Kim Jong Il had initiated this project and personally examined its design. Then the leader named it the Breast Tumour Institute of the Pyongyang Maternity Hospital.

Kim Jong Un looked round the whole of the four-storey building for a long time to acquaint himself with the state of construction and give scrupulous instructions. Noting that the construction of the building and the special naming of it did not mean all that had to be done, he said that what was important was to

staff the institute with competent doctors with profound clinical experience in treating mastopathy and breast cancer and able researchers and install up-to-date equipment.

In early November that year the leader visited the institute again. Stepping into the central hall he said with pleasure that he felt as if he were in a palace. He remarked that all the components of the institute should be of the world standard as it was a determined project for the women, and that there was nothing to spare for the women. He continued to say that as the institute had been fully equipped with ultramodern medical facilities they should establish a regular checkup system to detect mastopathy and breast cancer in their early stage and treat them in time, and that he wanted to leave nothing to regret about the institute as it was to serve the

The fourth national mothers' conference held on the occasion of the first Mothers' Day in November 2012.



► women.

Under his warm care the Korean women can have checkup and treatment regardless of their social status, occupation and property.

Blessings to Mothers in the Songun Era

The Mothers' Day in the Democratic People's Republic of Korea falls on November 16. It was instituted in 1912. It has the following story.

On November 16, 1961 President Kim Il Sung convened a national mothers' conference. At the conference the President delivered a historic speech *The Duty of Mothers in the Education of Children*.

Supreme Leader Kim Jong Un took measures to enact the Mothers' Day on that day and saw to it that the 4th national mothers' conference was held on the occasion. Learning in detail about different matters concerning the arrangement of the conference the leader took relevant measures. He also saw to it that high official commendations including the title of the Hero were conferred on exemplary mothers before the conference. He said that full preparations had to be made for the 4th national mothers' conference on the occasion of the first anniversary of the Mothers' Day, and that it was advisable to tell the participants in the conference that a revolutionary takes the first step in the bosom of his mother.

Thanks to the scrupulous instructions of the leader the conference was held splendidly. It was attended by mothers who had raised their children into stout pillars of the Songun revolution and those who had performed labour merits in the building of a thriving socialist nation. A renowned art troupe gave a congratulatory performance in honour of them. Kim Jong Un had a photo session with the participants. They keenly felt the great expectation of the leader who wished them to glorify their life as



A party is given to workers of the Pyongyang Kim Jong Suk Textile Mill in celebration of the May Day in May 2014.

rather ardent patriots cherishing true love for the future of the country and the revolution, and as women revolutionaries in the Songun era, than mothers of the family.

Workers' Palace, Workers' Hotel

In April 2014 a workers' dormitory was newly built for women weavers at the Pyongyang Kim Jong Suk Textile Mill. When Supreme Leader Kim Jong Un visited the mill in October 2013, he said that he would build a workers' dormitory at the highest possible level true to the earnest instruction of Chairman Kim Jong Il. Then he designated the building plot and sent a powerful construction force of the People's Army for the project. He took all necessary measures to finish the project as soon as possible. In this way the dormitory went up in a short span of some 180 days as one of praiseworthy edifices in the era of the Workers' Party of Korea.

Consisting of three seven-storey buildings adjoining each other and a restaurant, the dormitory looks just like a palace or hotel—the corridor with a good harmony of light pink and cream colours, large LCD TVs in the hall

of each floor, karaoke facilities, a restaurant, a library, a clinic, an amusement hall, a beauty salon ►



► and an e-library.

The leader also sent articles for recreational amenities to the workers staying there. A workers' banquet was given there in celebration of the May Day under the care of the leader.

A workers' dormitory was also newly erected at the Pyongyang Kim Jong Suk Silk Mill in January last. Today the women workers' chant of "Long live the Workers' Party" is wafting endlessly through the windows of the dormitories.

Day Spent for Servicewomen

In August 2012 Supreme Commander Kim Jong Un in-

spected the Persimmon Tree Company of the Korean People's Army. He made the rounds of the monuments to field inspection of President Kim Il Sung and Chairman Kim Jong Il, an education room, a barracks, a mess hall and a salt pit used by the company itself, and acquainted himself with the performance of their duty. He spent the whole day with servicewomen, seeing their artistic performance and giving them pep talks.

When the Supreme Commander saw in the education room photos of the company soldiers with the President and the Chairman, he said that simple mentioning of the Persimmon Tree Company thrilled him, and

that the company was a symbol of the Chairman's care for the servicewomen recorded in the annals of his Songun-based revolutionary leadership, and that for this reason this company was well known to the whole country and the whole world.

Hours passed, but he was still unable to leave the company—he saw the soldiers reluctant to part with him. Now he let each of the company soldiers stand by his side one by one to have a photo taken. The appearance of soldiers making a smile with happy tears standing by Kim Jong Un reminded them of a family sealed with blood ties instead of military ranks between the Supreme Commander and soldiers. □

A new dormitory is opened for the workers of the Pyongyang Kim Jong Suk Silk Mill in January 2017.



To Bring Joy to Women's Life

Warm care for women weavers

IN AUGUST 1969, PRESIDENT Kim Il Sung visited the Suphung branch plant of the Kusong Textile Mill to see how the workers, all of whom were women with families, were working there. A little while after he had left the plant, an official came running to the place and said that the President wanted to meet some weavers. When weavers arrived, he was engaged in conversation with officials. He welcomed the weavers and invited them to come nearer.

He asked one of them how long she had been working as a weaver, how much she got for a monthly pay, what her husband's job was, how many members there were in her family, and where she lived. She answered she had been working in the plant since its inauguration and that her husband was working in a power station. Then she told him her family were living happily in a newly-built dwelling house. He lightly nodded his head in approval and then turned to the others, asking them kindly about how their families were faring.

Then he asked an official if there were any families living inconveniently in Suphung because of housing shortage. The official replied all families were living in newly-built good houses. Now the President asked a weaver what her family were eating along with rice. She replied she cooked various delicious dishes and soups with vegetables, and the President further inquired if her family got enough supply of provisions, had plenty of soybean paste, soy sauce and cooking oil and regularly ate eggs and meat.

He said the branch plant was operated entirely by housewives, who were working hard to overfulfil the production plan and that since it was a plant run by the wives of the workers of the power station, their trouble should be diminished.

He went on to inquire closely if their husbands working in the power station were served with meals in good time by their working wives, and if there were enough small wares like socks and soap at the variety shops.

Before leaving, the President told the officials to install dust-proof devices in the plant without

delay not to cause the least injury to the women's health, and kindly shook hands with the weavers.

Cosmetics for servicewomen

In January 2001, Chairman Kim Jong Il visited the newly-rebuilt Sinuiju Cosmetics Factory. While looking round the production processes of the cosmetics workshop, he praised the *Pomhyanggi* cosmetics for their high quality. And he politely stressed the need to normalize production and supply the servicewomen and people with more cosmetics of good quality including cream and powder. For many years he had been deeply concerned about the supply of cosmetics to the servicewomen.

One winter day a few years before, he called at a women's company far away from Pyongyang, where he saw cosmetics neatly kept in private cases while examining the living conditions of the women soldiers. He was worried if it was due to the low quality of cream that the women soldiers got chapped in their faces and hands in winter in spite of cream applied before going out on sentry duty. And he said he heard powder was good to prevent chaps and that so he would see to its supply.

Since those were hard times for the country which was on Arduous March, no one cared about such things as chapped faces of women soldiers in winter. The female soldiers themselves, as well as the officers, thought it inevitable that their faces were chapped by the sea wind. But the Chairman was so deeply concerned about the matter. He said he had made sure medical cream was supplied to the women soldiers because he felt very sorry looking at the faces of the girls chapped by the sea wind when he visited the Persimmon Tree Company some time before, and pointed out that the People's Army officers seemed to care little about the life of the women soldiers. After that too, whenever he visited female sub-units, he stressed over again the need of cosmetics for the women soldiers. Under his warm care the servicewomen came to have a supply of good *Pomhyanggi* cosmetics.

Kang Hye Ok

Worthwhile Life

KOREAN WOMEN SIGNIFICANTLY celebrate March 8 International Women's Day. On the occasion they dream of their future looking back on their past life. I went to see some women to know their world—they have different jobs, different characteristics and different careers.

Successful Career

First, I visited the architectural college of the Pyongyang University of Architecture. There I met Chon Son Ok, chief of the architectural acoustics and illumination department. She said that she had done only what any woman could do in this country. When I said that it would not be so easy to make such a success as she had in education and scientific research, she told me the following story.

Chon was born and spent her childhood in a



Chon Son Ok (second left), department chief of the architectural college of the Pyongyang University of Architecture.

remote mountain village in North Hamgyong Province. Her mother was a farm worker. Seeing her mother pose for a photograph which meritorious workers deserved, Chon made up her mind to be as famous as her mother when she grew up. With the decision, she worked hard at her studies during her primary and middle school days. She was often praised by her schoolmates for her genius in mathematics. And yet, when she was satisfied with the solution of difficult problems no one else could do, her teacher often scolded her that she had chosen a difficult way of solving. Since then she was accus-

tomed to choosing an accurate and fastest way in whatever she did.

When she enrolled at Kim Il Sung University and then taught at the Pyongyang University of Architecture, she always kept her opinion. In the 1990s she attracted all people with her new Monte Carlo-style simulation of indoor illumination. Based on her theory and practical experience, she promptly carried out the tasks of making the best of architectural space and improving the illumination of exhibits at the International Friendship Exhibition House. She has worked for a large number of structures including the East Pyongyang Grand Theatre and the North Hwanghae Province Art Theatre developing acoustics and illumination. Over the years she became a Merited Scientist, professor and doctor. She moved to a new apartment in the Mirae Scientists Street.

"It would be difficult to make such a successful career as you have made. You've been widely introduced by the TV, newspapers and radio, and you have won academic degrees and titles and received official commendations," I said. Then, she said, "Women are playing a due role in occupying the world of science. I am one of those women."

She has two daughters, who are exerting themselves in scientific research.

Servant of People

It was difficult to have a talk with the chairwoman of the Pothonggang District People's Committee, as I had expected. It was no use waiting for her in her office. Thus, I decided to chase after her. Hearing that she had gone to see a war veteran in Ryugyong-dong No. 1, I went there in haste. The veteran told me that the chairperson visited him early every morning and inquired about his health and living conditions. He went on to say that he waited for her more anxiously than his own children. Then, he informed me that the chairperson had left to inspect a provisions supply station, a water purification station and a fuel base worrying about the supply of food, water and fuel to citizens in her district.

On my way after the chairperson, I came to know that she had tried hard to supply cleaner water to inhabitants in Ragwon-dong in 2014—she completed



Ryu Sun (*second left*), chairwoman of the Pothonggang District People's Committee.

- a project of laying thousands of metres of water pipe, set up tens of pumping stations and changed old transformers and motors with new ones relying on the district administration's efforts. Straight and wide roads, street trees, big and small parks, Kimchi factory, a paper mill and a foodstuff factory are all associated with her effort. So are the district People's Hospital, clinics and service establishments including the Undok House. A cage net fish farm was built in the Pothong River and a mushroom farm was set up to give benefit to citizens. The chairperson arranged a wedding ceremony for a special-class disabled soldier with parental care and gave priority to improvement of educational and living conditions of primary and middle schools, kindergartens and nurseries.

At last I found the chairperson walking to the Pothonggang Sports Park on the Pothong riverside lined with trees. Some park keepers told me that the chairperson often looked round the volleyball playground, the tennis court and children's roller-skating ground so as to make sure there was nothing inconvenient about mass-based sports activities. They added that she was no inferior to men in drive, ability, courage and initiative.

There I could have a small talk with her. She was open-hearted. When I said that she had done a lot of things she said simply and clearly, "You know I am responsible for the livelihood of the people, and I'm a servant of the people."

Her name is Ryu Sun, and she is a deputy to the Pyongyang Municipal People's Assembly.

Twin Silk Reelers

I visited the Pyongyang Kim Jong Suk Silk Mill

on hearing a story about twin young silk reelers. When I met them I knew they were of different ages and from different families and places. They were Kim Jong Hyang and Pak Il Ju. I asked how it was that they were called twins, when they replied bashfully, "We share the same mind."

I noticed that they were exactly the same at work—connecting broken silk thread at reeling machines. Looking at them working hard and assiduously, I could guess that they were fiercely competitive. Il Ju said that she worked hard to overtake Jong Hyang who was an innovative model worker and Jong Hyang said she was determined to look after more spindles so that she would not fall behind Il Ju. They were really competitive at work although they were close friends out of work.

When I asked them about their achievement they said that they overfulfilled their annual assignment in 2012 and 2013. I knew they had been honoured to take part in national conferences for their good work and to address the meetings. And they were admitted to the Workers' Party of Korea at the same time.

In June last year Jong Hyang had the honour of meeting Supreme Leader Kim Jong Un on his



Kim Jong Hyang (*right*) and **Pak Il Ju** are well-known innovative workers.

inspection of the mill. That day she spent a sleepless night.

Kim and Pak made up their mind together to work harder. When I said that I had seen at the entrance of the factory a photo in which they stood together after fulfilling their annual assignment last year, they said, "Our practice is the same, as well."

Kim Kwang Myong

His Real Daughters

A FEW YEARS AGO, A war veteran met Women's Union members in the office of Jonggo-dong No. 1, Rangnang District, Pyongyang. The war veteran was Ham Tong Hwan who

A few days later, some women came to see him at his house in Jonggo-dong No. 1. "We are Women's Union members living in the same block," they said, "From now on we'll treat you



went through the Fatherland Liberation War (June 25, 1950–July 27, 1953) and served in the army all his life at the frontline after the war. When the war broke out, he, a secondary school boy of 16, misrepresented his age and joined the Korean People's Army. Though he was the youngest soldier, he fought more bravely in battle than others.

Wearing three Distinguished Service Medals on the left breast of his military uniform, he talked vividly about so many battles, names of his comrades-in-arms, hills and villages where battles were fought, and even the trees growing there. His talk gave a deep impression to the members of the Women's Union.

like our real father."

After that, they visited him on national holidays, his birthday and Sundays. One day, the old man was ill in bed. Immediately, the women came to his bedside and nursed him until he was restored to health. Some of them brought delicacies at each meal, one of them brought newspapers daily, and another made a long journey to get an efficacious medicine for him. For their intensive care, the man got well soon.

The women who have been taking care of him for nine years come to him now with their sons and daughters. One of them, Kye Ryon, says she is pleased to see her children immersed in singing exercises to delight the war vet-

eran. She said, "Not only myself but all the Women's Union members regard him as their real father, because we have had a close intimacy with him like one family for a long time, and more because we have great respect for him as a war veteran. But for the war veterans who defended this land in the flames of war, how can we have a happy life today? That's why I bring my children with me so that they will take over the spirit of victory from the old veteran."

Out of regard for his wishes to work for society though he was old now, the women invite him and other war veterans to participate in a joint performance with the artistic motivational team of the Women's Union on the occasion of the Victory Day. They also make arrangements for the war veteran to have a meeting with senior middle school graduates who are to join the army. Coming up on the stage, he sings and recites his own poem that eternal happiness comes from the motherland, and wishes the young people will make great exertions for the prosperity of the country.

Thanks to the warm care of the people of this country including the Women's Union members of Jonggo-dong No. 1 who make it their creed to respect the revolutionary seniors, Ham, the war veteran, is now enjoying a worthwhile life.

Rim Ok



Women Footballers' Stories

NOW PEOPLE WONDER how the Korean women footballers could win the FIFA U-20 Women's World Cup 2016. Some of them think that it was a result of good nutrition and tactics. Then what is the bedrock of their infinite exertion which brought them consecutive victories defeating all the powerful rivals in all the games? One of these days I, as *Korea Today* reporter, had a chance to have an interview with the main players of the team.

Story of Silver Ball Winner

In her early days of training after she was admitted to the national team, Kim So Hyang, a forward, always blamed her teammates for frequent interruption of passes to herself. Although all the players of the team sent the ball to So Hyang in a training game, however, she failed to make

even a single goal, so her team lost. It was a due outcome of her failure to make a strenuous effort to improve her technique, blaming others.

Seeing her feeling guilty, the coach said to her, "Of course success in the football match isn't decided by a good player alone. All the players must do it well, and above all, they must have a single mind. Only when we're conscious of the honour of our country before our private honour, will we be able to win victory after victory."

Later, every time their teamwork was poor, So Hyang made an exact demand on herself and tried harder and harder. Thanks to her tireless efforts, she could win the Silver Ball award in the recent U-20 Women's World Cup.

She says, "My Silver Ball award is well associated with my fellows who made favourable scoring chances for me in the games. We all ran on behalf of our

country, and our sweat is permeated in the World Cup—and in the Silver Ball which I hold quite dear. Of course, this is an individual prize, but if my team had failed to win the World Cup I wouldn't be so glad as I'm now."

Story of Goalkeeper

The team members told me that to hear from Kim Myong Sun, goalkeeper of the team, would be as difficult as to make a shot into her goal. However, I managed to make her tell a story about how she had devoted herself to the struggle to win the victory.

Myong Sun was born in Jungsan County. Until the eve of her graduation from middle school, she had never associated her future with football. At that time Ri In Won, instructor at the Jungsan County Juvenile Sports School, noticed her for her unusually

► great stature and well-developed motor nerve. As she was about to finish middle school, she had little confidence in herself. She was afraid she could not catch up with other players. Her father, who works at a fishery station, would not agree to the instructor's opinion.

Nevertheless, the teacher visited her home for three consecutive days to persuade her parents, arguing that she had a born sense for a goalkeeper and that she would be able to make a successful career if she tried hard. At last

our duty to repay for the care that developed our talents.”

Story About Captain

Kim Phyong Hwa is No. 11 who left deep impression for her high speed, ability of choosing the right position and active role in the forward line. Unexpectedly, she told me about Choe Sol Gyong, No. 5 who was the captain and back.

According to Kim, Choe, usually a passionate and intellectual kind of person, turned into an

still training in the bodybuilding hall. Her steps turned to the hall, and she found Choe unexpectedly.

She was appreciated at today's meeting, but... Kim wondered. When she asked why she wasn't relaxing herself, Choe answered, "Everybody knows their weak point better than others. I know I still want persistence."

Her words made Kim review her life. She felt ashamed that she was proud of herself for her being fastest of all. Now she told her friends about the captain and all



Kim So Hyang,
winner of the
Silver Ball.



Kim Phyong Hwa,
the No. 11 player.



Choe Sol Gyong,
the captain.



Kim Myong Sun,
the goalkeeper.



her parents agreed and Myong Sun started football. As the teacher expected, she has grown up as seed player of the national team in a short span of time.

Myong Sun concluded her story saying, "Everyone of my team has such a story. We all trained ourselves at juvenile sports schools. I believe we won the World Cup as we are aware of

aggressive one in the training field. Her eyes watching the whole team running with her in the field never missed even a mistake of any members. Kim was often scolded by Choe who said Kim was a bit late at launching a decisive attack and making a decision. Kim was angry at her.

One evening, when all others were at rest, Kim heard someone

team members returned to the training hall.

Choe, holding them by the hand one by one, said, "Of course, each of us might be the best player in our home teams, but our aim is to win the World Cup, isn't it? That's why we're not allowed to feel content, I'm sure."

Kim Chol Ung

Mother's Bosom

I HAVE SEVEN-YEAR-OLD mixed twins. When I see them leaving for school every morning saying, "Mom, I'm going to school," I feel all the more keenly that I am a mother.

In fact, I could not move my legs freely due to the after-effects of poliomyelitis from which I suf-



fered four months after I was born. When I was very young, my mother would warmly care for me lest I should fall ill and tell me interesting old tales to keep down my loneliness. At that time it seemed to me mother was everything in my life. However, little did I know that mother was not the only one concerned about me. One day in 1978 when I was coming near the time of entering a primary school, a woman teacher from the Songbuk Primary School in Moranbong District called at my home. She told my mother she would take me to and back from school. Mother disagreed; she was worried it could injure my mind. But the teacher persisted that the state invested me with the same right to learn just like other children and that so I

should learn. That started my school life. Every day the teacher, in place of my busy mother, came and took me to school on her back, then to hospital after school, and back to my home. While I was looked after with loving care by the lady teacher, I came to walk by myself with the help of a cane instead of living as a cripple all my life. I finished my primary school course as an honour pupil.

I was now a middle school girl. Although teachers changed and classmates were new to me, my school life was full of joy. The school's Youth League organization decided that every student should do something good for the convenience of my study and life. Some of the students brought me efficacious medicines for my treatment and some others gave me all the daily necessities their parents had brought them from business trip.

After finishing middle school I was accepted as a sewer at the welfare service shop of Moranbong District as I wished. Working as a favourite tailor for the customers I married an extra-service non-commissioned officer of the Korean People's Army. On the day of wedding, my mother who came from Seoul said in tears that my marriage was unimaginable in south Korea.

As days went by, more and more people treated me with kindness. When I was diagnosed as incapable of childbearing, officials from the district and block came to my house with a medical care ticket and tonics for me. Doctors of the Pyongyang Maternity Hospital, too, did everything possible for me. When I and my twin babies came close to death, they saved us by giving us their blood as if we were their flesh and blood. When we left the hospital and came home, my entire neighbourhood came to see me with clothes for newborn babies and tonics for my early recovery. Today, the teacher of my twin children is taking scrupulous care of them, even giving heed to their nutrition exceeding me, their mother. Whenever I thanked them for their good turn, they would all say: "It is our respected Supreme Leader Kim Jong Un's intention to make it the tradition of the great socialist family to look after the physically handicapped people. You know it well, don't you?"

Their words would bring me to make a sincere confession: "Until now when I am a mother, I have been unaware of the happiness I have enjoyed in the bosom of the great mother. The bosom of my country that gives equal love to all its sons and daughters, that is really the bosom of the mother."

*Yun Jong Im, resident in
Pipha-dong No. 1,
Moranbong District,
Pyongyang*

In High Response to Appeal for Victorious Advance of Socialism

IN HIS NEW YEAR ADDRESS 2017 Supreme Leader Kim Jong Un put forth the militant slogan “Let us accelerate the victorious advance of socialism with the great spirit of self-reliance and self-development as the dynamic force!” Upholding the slogan the Korean people are now waging a vigorous general offensive to hit the targets of the five-year strategy for national economic development in the spirit of self-reliance and self-development. The objective of this strategy, set forth by the Supreme Leader at the Seventh Congress of the Workers’ Party of Korea, is to lay the foundations for the sustainable development of the country’s economy by reenergizing the overall national economy and ensuring a balance among economic sectors.

Last year was the first of the years designed for the effort to attain the strategic goals. The Korean people forcefully conducted the 70-day campaign and 200-day campaign organized for glorifying the Seventh Congress of the Party, and thus made a fresh breakthrough in the development of the national economy.

Scientists and technicians, following the successful launch of the earth observation satellite *Kwang-myongsong 4*, succeeded in the static firing test of new-type high-thrust motor of the launch vehicle for a geostationary satellite. By doing so, they have opened up a broad avenue to the exploration of outer space. Also, they established fully-automated, model production systems of the Korean style, bred high-yielding strains with a view to ramping up agricultural production and achieved other laudable scientific and technological breakthroughs one after another. All this will be of great significance in developing the country’s economy and improving the people’s livelihood. The electric-power, coal-mining, metallurgical, chemical and building-materials industries, rail transport and other major sectors of the national economy attained their respective production and transport goals. Numerous industrial establishments and cooperative farms registered the proud success of surpassing the peak-year level. The People’s Army stood in the vanguard in adding lustre to the history of “gold seas” and in creating a legendary speed at important construction sites. The sectors of education, public health and sports, too, made admirable achievements. When some areas in North Hamgyong Province were devastated by a sudden natural calamity, the whole country turned out in

the restoration effort in hearty response to the Workers’ Party of Korea’s appeal and achieved a miraculous success in a short span of time. All these miraculous successes were brought about by the single-hearted unity of all the service personnel and people and their great capacity for self-development.

Now the Korean people are all out in the struggle to open up fine prospects for the implementation of the five-year strategy and develop the country’s overall economy onto a higher plane with the spirit of self-reliance and self-development as the powerful means.

Science and technology are given primary importance. The sector of science and technology is concentrating efforts on solving scientific and technological problems arising in modernizing factories and enterprises and putting their production on a regular footing with the main emphasis on ensuring the domestic production of raw materials, fuel and equipment. Production units and scientific research institutes are intensifying cooperation between themselves, and enterprises are building up their own technological development forces and conducting a proactive mass-based technological innovation drive, thus propelling economic development with valuable sci-tech achievements conducive to expanded production and the improvement of business operation and management.

The electric-power, metallurgical and chemical industries are taking the lead in the efforts to hit the targets of the economic strategy.

The coal-mining industry and the rail transport sector are meeting the demands for coal and its transport by power stations and metallurgical and chemical factories on a top priority basis.

In the machine-building industry machine factories are stepping up their modernization, perfecting the processes for the serial production of new-type tractors, vehicles and multi-purpose farm machines, and producing and supplying different kinds of high-performance and quality machinery and equipment.

Light industry, regarding use of domestically available raw and other materials as their core, is revitalizing production and bringing about a turn in diversifying the range and types of consumer goods and improving their quality.

The agricultural front is raising a strong wind of scientific farming and pushing forward the movement for increasing crop yield. ►

Banner of Independence Raised in Haktanggol

IT IS A HUNDRED YEARS SINCE THE formation of the Korean National Association (KNA). As a secret organization pursuing the ideal of anti-imperialism, independence and great national unity, it left an indelible trace in the history of the Korean people's struggle to win back the country's liberation from the Japanese imperialists' military occupation.

Although the Korean people waged a ceaseless struggle to recover the country's independence, they suffered failure after failure as they did not have any clear method of struggle, and the struggle itself was dispersive and spontaneous. And the worshippers of great powers and national reformists exerted a great harmful influence on the anti-Japanese struggle.

Kim Hyong Jik, an indomitable revolutionary fighter, analysed correctly and comprehensively the errors in the anti-Japanese struggle. On this basis he set forth the idea of "Aim High" that it was essential to encourage all the people to unite single-heartedly and foster the strength that could repel the Japanese imperialists, and that as the cause could not be achieved in a couple of days, it was necessary to have a far-reaching plan. It incorporated a stout idea of achieving the country's independence from the imperialists by dint of the strength of the Korean people themselves, a revolutionary outlook on life whereby genuine worth of life should be sought in the struggle for the nation, and the spirit of uninterrupted revolution which demanded achieving national liberation at all costs even if it would take generations to do it.

Regarding the idea of "Aim High" as his motto Kim Hyong Jik vigorously conducted the work to find comrades with whom he would be able to share his intention and fate, and the struggle to arouse broad

masses of people to the anti-Japanese struggle by awakening them. He readily trekked a hundred miles at a go to find even a comrade and spared nothing for the good of his comrades. Thus, he always had many comrades of great caliber and with broad knowledge and outstanding personalities, including Ri Po Sik, Pak In Gwan, Paek Se Bin (Paek Yong Mu) and O Tong Jin, who protected him at the cost of their lives.

In the period when he taught at Sunhwa School in Mangyongdae and Myongsin School in Kangdong, he, while applying himself to the education of the younger generation on one hand, travelled to different regions including North and South Phyongan provinces and Hwanghae Province to train core elements and lay the mass foundation on the other. Building on this preparation he convened a historic meeting at Haktanggol in Pyongyang on March 23, 1917 where he proclaimed the formation of the Korean National Association. At the meeting he said that the aim of the KNA was to achieve national independence and establish a truly civilized state in Korea just with the Koreans' own united efforts. He set forth the fighting task and methods and the rules of activity of the organization and read out the prospectus of the KNA.

With the formation of the KNA the Korean people acquired an organization which could lead their anti-Japanese struggle in a unified way, and they were now able to advance their national liberation struggle independently with a clear ideal and method of struggle. At the time there were few clandestine organizations in Korea like the KNA with a thoroughgoing stand on anti-imperialist independence. By that time the Independence Volunteers, the Great

► The fishing sector is conducting a dynamic drive for catching fishes and pushing perseveringly ahead with aquatic farming.

The construction sector, while making efforts to complete the construction of Ryomyong Street at the highest level, is concentrating its forces on the major construction projects. More educational and cultural facilities and houses are going up in an excellent way.

Upholding the slogan of self-reliance and self-sufficiency, every field and every unit of the national

economy are launching a dynamic struggle to increase production and practise economy to the maximum.

The whole country is out in land administration to further transform the appearance of the land.

All the people are engaging themselves in a dynamic general offensive to hit the targets of the five-year strategy on the strength of the spirit of self-reliance and self-development.

Yom Song Hui

► Korea Liberation Corps, the Korean Sovereignty Restoration Corps and similar organizations, that had been formed before the KNA, had all disbanded due to the repression of the Japanese imperialists. Since underground fighters were indiscriminately arrested once they were detected, people dared not join the anti-Japanese activities unless they had great heart. Some engaged themselves in passive activities within the boundary of Korea after getting permission from the Japanese imperialists—to the extent they could not go against their grains.

As was clear from the prospectus, the KNA adopted the stand that Korea's independence should be won with the concerted efforts of the Korean people themselves instead of the power of outside forces, by means of arms instead of any peaceful means—it was of epochal significance.

Later, the organization expanded rapidly and became the largest anti-Japanese underground revolutionary organization of Korean patriots at home and abroad around the time of the March First Popular Uprising in 1919. Its organizational network spread throughout the country and even reached Beijing, Shanghai, Jilin, Fusong, Linjiang, Changbai, Liuhe, Kuandian, Dandong, Huadian and Xingjing in China. People of all walks of life were admitted to the KNA, including workers, peasants, students, soldiers (of the Independence Army), shopkeepers, religious believers and artisans.

The association had a closely-knit system. It admitted into its membership only well-prepared, tested patriots through strict screening, maintained a vertical system of contact and used code words for communications between its members. It was thoroughly covered with such lawful peripheral organizations as the School Association, Stone Monument Association and Home-town Association. It had district leaders under it and assigned its correspondents to work in Beijing and Dandong for the purpose of liaison with people working in foreign countries.

In the course of forming and building up the KNA Kim Hyong Jik was arrested and tortured cruelly by the Japanese imperialists. But he waged an unyielding struggle ceaselessly with a will to struggle to the end through generations to bring a new dawn of independence without fail to the 3 000-ri land of golden tapestry even if his body were torn to pieces. At that time he made the song *Green Pines on Nam Hill*, an expression of his will. (The Korean people are still fond of singing the song.)

At the Chongsudong Conference held in July 1919 Kim Hyong Jik proved the historical necessity for a proletarian revolution. On the basis of this, he

convened, in August of that year, a meeting of heads of all districts under the Korean National Association, liaison agents and chiefs of independence movement organizations in Hongtong District, Kuandian County, China. On the occasion he proclaimed the policy of shifting the anti-Japanese national liberation movement from a nationalist to a communist one and advanced, in keeping with the changes in the time, the task of defeating Japanese imperialism with the Korean nation's own effort and building a new society which would ensure the rights of the unpropertied masses. He used to explain his idea of the proletarian revolution plainly by describing it as the building of a new society which would provide rice to those who had no food and supply clothes to those who had no clothing. And through his practical activities he awakened workers, peasants and other working masses to a progressive idea and united them into one revolutionary force.

He also made a great effort to prepare new varieties of armed activities and unite armed groups. With the conviction that the country could be regained only through armed activities, not through petitions or diplomacy, he sent members of the KNA to various units of the Independence Army to guide them in various matters—in the propagation of the progressive idea in the armed units, in the purchase of weapons, in the training of military cadres and the increasing of the combat efficiency of the army. His plan was to select patriotic young people from the proletarian class and train them into military cadres, ideologically remould the commanders and the rank and file of the existing armed organizations and thus turn their ranks into an armed force of the workers and peasants that would be capable of carrying out the proletarian revolution.

Thanks to his energetic activities the armed units which had been rejecting one another were now united into a single organization. They conducted daring activities to raid police stations of the Japanese imperialists and remove vicious stooges, thus striking the Japanese aggressors with terror while inspiring the Korean people with confidence in victory in the anti-Japanese struggle. The historic cause of Korea's independence Kim Hyong Jik wished so eagerly was accomplished by his son Kim Il Sung through the anti-Japanese armed struggle.

The immortal exploits of Kim Hyong Jik who established the independent stand in the Korean people's anti-Japanese national liberation struggle and led it along the road of the proletarian revolution will go down for ever with the Korean National Association. □

In Support of War for Liberation of Northeast China (1)

PAST THINGS OFTEN evade human memory with the passage of time, but the valuable life of great persons and their achievements in the struggle for the masses' cause of independence are etched in history and shine forever.

President Kim Il Sung of the Democratic People's Republic of Korea set a model of internationalist solidarity by giving sincere aid to the Chinese revolution in the latter half of the 1940s. The *Korea Today* editorial board serially

introduces how the Korean units fought at the cost of their blood true to the instructions of President Kim Il Sung to win the war for liberation of Northeast China together with the Chinese comrades-in-arms.

Internationalist Duty

In August 1945 the northeastern region of China was roaring with the cheers of the people for the defeat of the Japanese imperialists. Now that Japanese imperialism fell that had been slaughtering and plundering the people with all manner of cruelties, the population believed that they would be able to have a new world of their own. Contrary to their expectation, the region was faced with a new war.

In order to turn China into an important Asian base for their confrontation with the Soviet Union and Communism at large, the US imperialists gave before the Japanese fall US\$ 6 billion worth military aid to Chiang Kai-shek and prepared his Nationalist (Kuomintang) army as a shock force to fight against Communism. Supported by the Americans before and after the Japanese downfall, the Nationalist army multiplied into a formidable force of 106 divisions with two million troops in all, armed with modern military hardware. American military advisers were dispatched to train the Nationalist troops in a hectic way. Chiang's army was built up with even air force and navy.

Chiang became more ferocious with the conclusion of an agree-

ment on friendly alliance with the Soviet Union on August 14, 1945. Immediately after the conclusion of the treaty the Nationalists launched operations to seize the whole Northeast China, which Chiang had sought for many years. In the course of this Chiang's strength grew sharply to 4.3 million, occupying the inhabited areas whose population accounted for 70 per cent of the Chinese total.

With these developments the Communist Party of China was driven into a critical situation. By the time the Communists had set up liberated districts in the rural areas north of the Yangtze River, that is, in Shanxi, Hebei, Henan and Shandong provinces. But the population in the areas was no more than 30 per cent of the Chinese total.

Worse still, in Northeast China where Chiang Kai-shek was attempting to hold sway, the Communist organizations had not yet been restored after they had been destroyed following the outbreak of the Sino-Japanese war on July 7, 1937. To make matters worse, the armed forces under the Communist command consisted of infantry alone, and their weapons and equipment were not desirable at all. For the Communist army to fight against the Nationalist enemy who were incomparably su-

perior both in strength and technical equipment would be quite an ordeal. Who would emerge victorious in the war was a serious problem that would have colossal effects on the imminent political situation in China and political changes in Asia. No nation or individuals expected the Communists would win the war.

Kim Il Sung, the leader of the new Korea, with a deep insight into the grave situation in Northeast China, decided to help the Chinese Communists in their cause. Foreseeing that Chiang Kai-shek might detonate a civil war in China sooner or later, Kim Il Sung in August 1945 instructed the commanding officers and other fighters of the Korean People's Revolutionary Army to offer sincere assistance to the Chinese revolution by entering the war to liberate Northeast China themselves.

Noting that support for the Chinese people in their revolutionary struggle was the noble, internationalist duty of the Korean communists and all other Korean people, he told the KPRA military and political cadres—who were to be dispatched to the northeastern region—what to do and how to do them in their theatre. It was essential to actively help the Chinese revolutionaries to organize armed ranks in their

► respective areas of activities, he remarked. It was necessary for the armed ranks to comprise stalwart young Koreans and Chinese with anti-Japanese war veterans at the core and embrace the people's armed units, which had been organized and operating separately in different places, so as to expand the force rapidly, he stressed.

The Korean communists would have to provide effective assistance for the people in various places in their effort to establish a democratic government before the Kuomintang government could "accept" administrative power over this region, Kim Il Sung stated. They would have to provide hearty assistance for the government organs in their efforts to mobilize the armed units and all other democratic forces in dealing strictly with all those who disturbed social order and in stamping out seditious moves of landlords, bandits, and remnants of the defeated Japanese army and the puppet Manchukuo army. It was also needed to work hard, in close cooperation with the Communist Party, to build up its local Party organizations so as to set up Party organizations where there was no grassroot organization of the Party and expand, at the same time, the Party ranks steadily, by recruiting the best workers and peasants. They had to pay due attention to the effort to strengthen the Party's unity and cohesion.

Kim Il Sung also mentioned the need to help local Party organizations form mass organizations to suit local conditions and the preparedness of the people there as the efficient formation of mass organizations was extremely important in rallying the revolutionary forces.

Also important was to give help in the work of forming the united front to rally all the democratic forces, the leader noted.

Particular attention would have to be paid to strengthening solidarity between the Korean and Chinese peoples. The Korean and Chinese peoples had cooperated in the hard-fought struggle against the Japanese imperialist aggressors, but the enemy's manoeuvres of playing one nation off against another were a serious obstacle to solidarity between the two peoples. The Korean communists, Kim Il Sung warned, had to refrain, whatever the situation, from any words and behaviour, which might weaken solidarity between the two peoples, because they might be fooled by the enemy's plots to pit one nation against another if they were carried away by national prejudice in dealing with the situation, and failed to see through the enemy's tricks. It was important to make it clear to both the Korean and Chinese peoples that they were waging a revolutionary struggle to build a new society and encourage them to display a spirit of solidarity and cooperation.

The leader said that the motto of the Korean People's Revolutionary Army, "***As fish cannot live without water, so guerrillas cannot live without the people,***" was a maxim for the revolutionaries then and in the future, just as it had been in the days of the anti-Japanese armed struggle. They would have to always go among the people and carry out their tasks by relying on them, he stressed.

Kim Il Sung told that as Kang Kon would take charge of their work in Northeast China they would have to report everything to him, who would stay in Yanji, and act according to his instructions. They would also have to maintain close touch with the headquarters of the Soviet forces and the organizations of the CPC in relevant areas.

Shaking hands with each of the commanding officers and men who would leave for Northeast

China, Kim Il Sung said that although he was eager to take all of them to the dear homeland so that they might reunite with their flesh and blood and participate in the building of a new nation, he had to send them to the battlefield again to straighten out the situation in Northeast China. Then he sincerely asked them to take care of themselves and return in good health.

Suppressing the surge of longing for their homeland the military and political cadres and men of the Korean People's Revolutionary Army made up their mind to win victory in the war for liberation of Northeast China. They arrived in Yanji on September 17 and left for their relevant places of assignment the next day. Kang Kon, Kim Man Ik and Pak Kyong Suk were to work in Yanji, Pak Rak Gwon and Kong Jong Su in Longjing and Helong, Choe Kwang and Kim Yang Chun in Wangqing, and O Juk Sun in Mingyuegou. A lot of anti-Japanese revolutionary veterans of Korea began to fight in the areas.

Kim Il Sung, while dispatching military and political cadres and other fighters of the Korean People's Revolutionary Army, made sure that Korean fighters who used to be engaged in the anti-Japanese armed struggle before settling in local areas in China, and the armed groups moving to Northeast China from China proper were all enlisted for the coming war.

In this way a struggle was launched to prepare the guarantee for victory of the Chinese Communists' revolutionary cause in Northeast China which was a lawless stage of violence for all kinds of reactionary groups like the remnants of the defeated Japanese army, the puppet Manchukuo army, landlords and bandits, as well as the Kuomintang force following the defeat of the Japanese imperialists. □

To Attain Higher Aim



EARLY LAST YEAR THE Taean Friendship Glass Factory laid a new process which can produce tens of thousands of square metres of hollow glass-plastic sash window annually.

Recently I, as a *Korea Today* reporter, visited the Taean Friendship Glass Factory. When I got to the neat and clean shop ringing with the buzzing, Jo Won Gwan, a workteam leader, greeted me with pleasure. He explained the general production process guiding me round the site.

The production process was divided into two parts—hollow glass production and plastic sash window production. When I reached the hollow glass production site I found different kinds of facilities of the preceding stages including an aluminium strip bending machine, an anti-moisture agent filling machine and an aluminium strip paste coating machine. The most at-



tractive were a washing drier and a glass synthesizer in the streamlined process. Jo made a show of operating a washing drier. Glass went by rollers automatically into the machine and came out perfectly washed and dried. Then same-size pieces of glass were combined in the glass synthesizer with aluminium strips which have the function of moisture prevention.

Ri Hyang Mi, a hollow glass maker, said, “Hollow glass-plastic sash windows are very popular. Especially, housewives say in unison that our windows have great heat and sound-proof effects.”

Completed panes were fixed in plastic sashes. The production process of plastic sashes was also spectacular. I saw many machines like a double-angle cutter which can cut both sides of plastic strips of any size, a V-shaped cutter, an A-shaped cutter, a copying-drilling machine, a milling machine and an edge bevelling machine.

Pak Myong Chol, a plastic sash window maker, said, “What do you think we are proud of? We are proud that our products give help to the improvement of the living standard of the people. More and more people demand hollow glass-plastic sash windows now, and we have a greater task to attain a higher aim.”

Jo said that his factory sent its products to the middle and primary schools for orphans, the sanatorium for war veterans, the satchel factory and the Thaesong Cooperative Farm in Nampho. The workers do their best to operate their machines true to the standard procedures and improve their technical and skill levels, he said, and added his team would raise the quality of hollow glass-plastic sash windows up to the world's advanced level.

Listening to him, I imagined the future of the factory producing a lot of high-quality glass goods for different usages.

Ri Chung Ho

Shortcut

MODERN WELFARE service establishments in the Democratic People's Republic of Korea usually use products of the Sariwon Taesong Towel Factory. Favourite public places including hotels and the Munsu Water Park in Pyongyang, for example, use towels from the factory. Patrons of Pyongyang Department Store No. 1 and Kwangbok Area Supermarket demand the factory's towels alone. The popularity of the towels is attributable to the effort of the workers and technicians of the factory.

In 2015 general manager Jang Myong Sil was anxious that her factory's business result was in doldrums. She knew she had to produce towels that would satisfy the high standard of the people's increasing demand for cultural and emotional enjoyment. There were two ways to settle the problem in a short period. One was to import weaving machines of high performance from abroad and the other was to modernize the existing machines by equipping them with CNC technology. At first, many people argued for import, regarding it as the fast track. They knew reconstruction of the old equipment had many difficulties because working object of the looms is not iron but silk. In reality, however, the import could hardly be a fast track, for it would take a good time to prepare money and, more importantly, the hostile foreign forces were obstructing the import. Jang realized it was high time to make up her mind. She remembered her factory transformed old shuttle looms into flexible shaft looms in a few months in 2014 to increase production.

However, the introduction of

CNC technology was an untrodden path for the factory. First, they started reconstruction of the core of the dobby loom in order to change weft patterns automatically. In general, the towel quality is determined by the weft pattern. Earlier, they used the weft effect, but weft patterns were still undesirable, and that part was little distinguishable.

The factory encouraged all employees to turn out to solve the problem, which soon began to pay off profusely. An ordinary maintenance worker developed a colourful weft selector which can decorate weft patterns with different colours of thread. Achievements increased day by day. The technicians and workers completed the automation of weaving machines by designing and manufacturing a general control panel of the loom with their concerted efforts and creative wisdom.

Finally, they set a great target

to establish an integrated production system relying on their own efforts. The workers who had finished distance learning college played a pivotal role. Thanks to their endeavour—they continued to work and contrive while learning—the establishment of an integrated production system which had been thought almost impossible for the factory itself finally turned into practice in late 2015. As a result, the factory could accept any order at any moment while boosting the production and improving the quality.

In early 2016 the products were highly appreciated at goods exhibition for their diversity of shapes and patterns and high qualitative levels. Now the factory produces varieties of towels—lovely and refreshing bedspread, bath towels of smart patterns and soft and light face towels. All the new products are conceived and designed by the workers who have learned at distance-learning colleges.

Jang says, "It has been a new road of difficulties and obstacles for us. But it is truly a shortcut."

Chae Kwang Myong



Ryongaksan Soap Factory



THE RYONGAKSAN SOAP Factory, newly built last year, is situated at the foot of the picturesque Mt. Ryongak which is called "Mt. Kumgang in Pyongyang." Erected in a little over a year the factory has a capacity enough to satisfy the national demand.

It was placed there because the location has clean and clear air and, in particular, the mountain is renowned for its spring water. The water has plenty of various kinds of microelements including calcium, magnesium, chlorine ion, sulfuric ion and strontium. Especially, it contains a suitable amount of selenium and fluorine which are healthy materials, so it is efficacious in curing different diseases. The water was certified by SGS-CSTC Standards Technical Services Co., Ltd. in June 2015, and on several other occasions.

The soap factory, using this spring water, turns out scores of kinds of products such as liquid soap and detergent for various





► purposes and with properties that pander to public tastes. Washing liquid soap provides convenience in washing clothes, and the shower gel added with physiological active materials and natural aroma improves the skin and retards its aging, and helps protect the skin. The unique aroma of the material added to the detergent for kitchen cleansing is harmless to the human body, and it never smells after washing dishes.

The most popular of the products is washing liquid soap. The several kinds of soap contain different materials, which are effective in preventing decolorization, and biolysis enzyme, so they have no harm on the skin and fibre and have high detergency. They also

sustain high detergency in the hard water found in coastal, coal-mining and limestone areas, and remove unpleasant smells. And their scents last long, giving soft and fresh feelings that make people refreshed.

The factory thoroughly ensures the hygienic quality of products. The general analysis lab undertakes the analysis and checkup of not only materials and products but also all the production processes including material feeding, vacuum emulsification, mixture churning, injection and packing.

Manufacturing functional products is the factory's development strategy. The technical development section is engaged in a

dynamic effort to develop new products according to age, sex and region and update their qualities. Various kinds of liquid soap are developed using functional materials and put into production—they have such effects as prevention of epilation, interception of ultraviolet ray, rinse of dandruff, protection of skin and retarding of its aging. The factory uses natural chlorophyll abstracted from seaweeds, oryzanol from rice bran and sulfur mud from Kwangryang Bay, Onchon County, Nampho.

The *Ryongaksan*-brand products are available at Pyongyang Department Store No.1 and other commercial establishments across the country.

Kim Chol Hyon



Making the Most of Wind Power

IN RECENT YEARS THEY ARE endeavouring to develop and use natural energy including solar, wind, geothermal and tidal powers in the Democratic People's Republic of Korea.

The electrotechnology faculty of the Kim Chaek University of Technology has achieved a number of successes in the work of developing highly efficient wind-driven generators of various types. In August last year they presented an involute wind-driven generator to a national sci-tech exhibition dedicated to the field of developing and using natural energy and economizing energy. The generator came as one of the top three exhibits. And at a national IT achievement exhibition held in November that year a highly efficient windmill flier designing support program the faculty had developed was awarded a prize, attracting the interest of visitors.

Kim Yong San, head of the research team, says, "The involute wind-driven generator we have developed is convenient for families to use as the flier is much more efficient with less noise and greater reliability, stability and aesthetic quality." And he tells a story:

One day in February last year the research team had a discussion to introduce high-performance wind-driven generators across the country. To the surprise of the participants, researcher Kim Mun Hui made an unexpected suggestion. She said that since the horizontal-axis wind-driven generator with three fliers was scarcely installed in dwellings and streets because of a number of defects, they had to develop a new type of generator which would be attractive, economical and easy to install. Then, she produced an idea on a new type of involute wind-driven generator.

Thus a relevant research work began. An important problem was to apply an involute curve to the flier designing. To raise the efficiency of wind energy to the maximum, it was important to set a reasonable ratio of diameter to length of a flier, make a flier model based on the principle of involute curve and screw and figure out the flier shape ensuring a broader flier surface hit by wind.

To solve the problem Kim Yong San and Kim Mun Hui worked day and night. Though they failed over again in computer simulations while studying science and reference books, they finally succeeded in



acquiring reasonable values in the third test. Now they entered the stage of properly arranging and fixing the generator and the turning device. The bottleneck was that the centroid as a whole was unstable, for the generator itself was too heavy, thus the generator's turning to the wind direction was awfully awkward. When they were anxiously groping for a solution researcher Kim Kwang Il blurted, "Why do you put the generator at the back always? Fix it in the front, and that will do." Everybody approved his idea.

In this way many scientific and technological problems were solved through the pool of collective knowledge and zeal, and the involute wind-driven generator took shape after the ninth test.

Kim Mun Hui explained the advantages of the new generator. "This generator has a good mobile quality as the fliers tap energy all about their surface. And the fliers catch the whole energy of the wind blowing against them, thus increasing the generation efficiency. The noise has become less by more than a half compared to older generators. The fliers resemble a flower in their shape."

Kim Yong San says, "There are still quite a few sci-tech problems to solve to make use of the wind force. We will produce new types of wind-driven generators of higher efficiency by intensifying the research in the use of wind energy with our efforts and knowledge."

Now they are pushing ahead with a research project in the final stage to develop a new model of wind-driven generator by building on their achievement.

Mun Il Jin

Newly Developed Functional Cosmetics

THE DEMOCRATIC PEOPLE'S REPUBLIC OF Korea is the world's leading producer of sea tangle. Considering that the country is surrounded by the sea on three sides, a full-scale research began a decade ago to make effective use of medicinal resources contained in abundant algaoid supplies. At the time fucoidan was extracted from sea tangle in quantity and developed into an instant health food that could be taken easily anywhere.

Fucoidan, a natural sulphonated polysaccharide, is effective in inhibiting arteriosclerosis, coagulation of blood and tumorigenesis. Among the people who used it regularly many attained improvement in or complete treatment of their illnesses including varieties of cancers, thrombosis, hyperlipemia, diabetes, hepatopathy, nephritis, high blood pressure and arthritis; constipation disappeared and different health indices improved regarding stamina and mental conditions. The remarkable thing drew greater attention since it had been developed by a woman scientist in her twenties from the Faculty of Life Science of Kim Il Sung University.

Today, a decade later, a functional cosmetic article made of alginic acid extracted from sea tangle is a great favourite of women. It was developed chiefly by Yun Hak Bong, a scientist

from the Faculty of Life Science of Kim Il Sung University. Earlier he had been a member of the fucoidan development team.

Yun was an enthusiast with a fervent spirit of inquiry while he was studying at a university. While studying fucoidan he was uneasy that sea tangle was thrown away after fucoidan was extracted from it.

One day he was surprised at the result of his analytical experiment of the waste. It contained tens of percentage of alginic acid which was well known as versatile material. As it has no poisonous effect on the living body and has unique physicochemical and biological properties, it was widely used in many fields like food industry, textile industry, paper industry and pharmaceutical industry and the medical field. He was excited about it. He embarked on studies of literature immediately. Expanding the scope of his research he came to know that the application of alginic acid to cosmetics would effectively improve viscosity control, membrane formation, emulsification and moisturization. The material has a powerful property of moisturization for its strong pull of a 200-300 times greater amount of water than its own. For these structural and physicochemical qualities, it is

not only quite soluble in water but also easily emulsified. So it could be added to varieties of cosmetics for moisturizing, thickening and emulsifying. In addition to moisturizing and stabilizing qualities, cosmetics with alginic acid are effective in prevention and removal of side-effects of cosmetics.

His research team helped him actively. They found out a suitable way of separating fucoidan and alginic acid successively from sea tangle and clarified functional properties of alginic acid like moisturization and adsorption of heavy metal ion. Based on this, they found out a suitable ratio of composition of functional materials.

Alginic acid lotion became an instant favourite among the users. It is effective in improving complexion and removing acne, black spots and wrinkles on the face. It was exhibited at the International Trade Fair held in Pyongyang. It is on sale at different service establishments including Pyongyang Department Store No. 1.

The researchers are not satisfied with their success. They are intensifying their work to develop more varieties of functional cosmetics.

Yun Hak Bong says, "It is no more than the beginning. Our aim to develop natural and less irritating cosmetics is getting higher."

An Nam Hui

Yun Hak Bong (centre).



Pyongyang University of Railways

The locomotive running gear laboratory.



The locomotive driving simulation laboratory.



The changes-in-rail measurement laboratory.



THERE TOOK PLACE THE 41ST ACM-ICPC Asia Pyongyang Regional Contest at Kim Il Sung University in November last year.

One hundred and scores of students selected from 28 universities of the DPRK took part in the contest. Students from the Pyongyang University of Railways came within the top three places as they solved in a short period the problems which demanded an ability for correct analysis of matters and phenomena, many-sided knowledge and capability for designing algorithm and programming.

Their performance in the contest is unthinkable separated from tireless efforts of the teachers at their university. In keeping with the actual situation in the country, in which it is vigorously pushing ahead with the building of a talent power and sci-tech power, the university is directing a great effort to bringing up all its students into practical talents.

New teaching methods, aimed at encouraging the students to apply their knowledge skilfully to practice, are being actively studied and introduced in teaching. Before giving lectures, the teachers inform the students of the actual realities; and during the lectures, they encourage them to compare the realities with what they are learning to find out the differences between them and the ways to solve them, before presenting their opinions.

Kim Chang Gun, vice-dean of the Faculty of Education, says that this method develops the students' ability of analysis, creativity and self-reliance.

The university also strives to improve the students' practical ability through experiment and practical training. A building, erected recently in the

The transport control laboratory.



- ▶ university compound in keeping with the demands of the era of the knowledge-based economy, has different rooms equipped with all the facilities and devices for giving students a deep knowledge of rail transport, such as a room for controlling the experimental equipment comprehensively, a transport control room, a room for locomotive driving simulation, a hydraulics laboratory and a laboratory for measuring railway structures.

Nam Kung Hwan, instructor at the transport control room, said, "Through practice in the room, the students accumulate knowledge related with train service, study the situation in each railway station and acquire ability to control railway traffic."

In the driving simulation laboratory, the students drive 3D locomotive learning how to operate its traction, braking and driving switches, to measure speed and time at different driving modes and to handle the devices and switches in difficult and unexpected circumstances.

Pak Thae Il, head of the rail experiment laboratory, said that while conducting experiment in railway structures the students decide how to measure the changes in the rail and wheel axis and experiment with their decisions. He added that he would have the laboratory built up so that the students would be able to carry on experiments in an environment similar to reality.

Thanks to the methods of education based on proper combination of theoretical and practical instruction, those will shoulder the future of a talent power, a sci-tech power are growing in a large number.

Sim Yong Jin



Medical Encyclopaedia *Uibangryuchwi*

UIBANGRYUCHWI IS ONE OF Korea's three typical classic books on Koryo medicine along with *Tonguibogam* and *Hyangyakjipsongbang*. It was compiled on the basis of all the achievements and experience in development of Koryo medicine until the early 15th century. It was made up of 365 volumes by some scientists working at *Jiphyonjon*, a scientific research institute of that time, between 1443 and 1445. It went through three times of revision and amendment before it was published in 266 volumes in 1477. Three volumes are dedicated to general introductions and the other 263 to particulars.

The part of general introductions comprehensively describes methods of medical examination, prescription, dosages, traits which medical staffs must keep and general principles in treatment as well as ingredients, efficacy and prescription of individual Koryo medicines. The part of particulars is divided into 95 sections which deal with all the diseases—the internal medicine, surgery, ophthalmology, dermatology, gynaecology and paediatrics and other problems—and describe their causes, symptoms and treatments.

Uibangryuchwi is the crystallization of rich clinical experience achieved in the eastern countries at that time, describing as many as 5 400 kinds of prescriptions for the gynaecological problems alone. The bulky document of more than 60 000 pages was published over 300 years ahead of the book *Medical and Surgical Encyclopaedia* (7 volumes) published in 1807 in Spain—which is recognized as the first medical encyclopaedia in Europe. It is also incomparably voluminous than the European one in scale.

Thanks to the Workers' Party of Korea's policy of preserving the national heritage, the book was translated and published in 20 volumes from 1974 to 1980, and it is contributing to improvement of the people's health.

Ri Song Chol

Visit to Ryugyong General Ophthalmic Hospital



SOME TIME AGO, I visited the newly built Ryugyong General Ophthalmic Hospital. It is situated in the Munsu area that has turned into a more perfect hospital village with the erection of such hospitals as the Breast Tumour Institute of the Pyongyang Maternity Hospital, the Ryugyong Dental Hospital and the Okryu Children's Hospital. The external form has clear indications of the ophthalmic service as the facade of the building is etched with models of eye and eye chart.

When I was entering the hospital along a wide and straight pavement, Ryu Un Hui, first deputy director of the hospital, came out to welcome me. Entering the ground-floor hall, she explained, "My hospital is a comprehensive and modern medical service centre. It comprises a four-storey building for outpatients, an eight-storey building for inpatients and an eyeglasses shop which provides services of replacing or making all kinds of eyeglasses." According to her, occupying an area of 11 800 square metres, the

hospital has wards, treatment rooms for outpatients, eyesight testing rooms and operation rooms. It can attend to scores of thousands of patients a year.

We went round the eyeglasses shop on the ground floor. I found it well furnished with various counters which are full of eyeglasses of all kinds by sexes, ages and types. In the shop are also correction and processing rooms. Kim Mi Rae, a worker in the correction room, said, "We examine customers' eyesights and correct them so that they can choose or

►





An operating theatre.



An inpatients' room.



The e-library.

► have eyeglasses processed as they wish.”

Coming out of the shop, we saw a girl being escorted by a nurse upstairs after reception. So we followed them to drop in at the cataract department. Stepping into a room, I found Paek Won Myong, deputy director for technical affairs, beginning to examine the eyesight of the girl. Her name was Cha Un Sun, 22, who lives in Taesong District. According to her, she had begun to lose her sight when she was 13, and now she could hardly go out without a help. After a while, Paek told her that she would be able to see after an operation. I asked him about operation rooms.

Paek said, “As you’ll see, the operation rooms on the second floor are germfree all the time: the walls are covered with antibiotic nano-silver plates, the floors with antibiotic plastic mats and the rooms are ventilated with fresh air through anti-germ filters. The rooms are equipped with ultra-modern facilities like a vitreous retina cutter.” Then, we looked round the operation rooms and intensive treatment rooms on the second floor.

In addition, we looked round the e-library, the conference room and offices on the third floor. With the introduction of a geothermal heating, the hospital ensures that the indoor temperature is always over 24°C, Paek added.

We also went to see the children’s ophthalmic department on the sixth floor in the ward for inpatients. Going up by the lift, Ryu said, “This ward for inpatients consists of the dispensary and the emergency department on the ground floor, laboratories and offices on the first floor, wards for retina cases on the second floor, wards for cataract cases on the third floor and wards for traumatic and orthopedic cases on the fourth floor.”



The optician's at the Ryugyong General Ophthalmic Hospital.

► When we arrived there, nurse Kim Sol Hwa greeted us. After passing through the corridor whose walls are fixed with pictures of cartoon figures to satisfy children's sentiment, we looked round the playing area and the interview room before going into a ward. There I had a chat with Jang Il Ryong, 12, pupil of 2-2 class at the Songyo Junior Middle School, Songyo District, who had had an operation several days before. Jang said, "Something was wrong in my eye when I had a bruise at four. Now I have got a good eye after the operation. I am very glad indeed. As the ward is well furnished with an LCD TV, a refrigerator and other facilities

and we can have warm water in the wash-cum-bath at any time, it just helps me get better quickly."

"All the wards are convenient for stay and treatment. And the children are supplied with soya milk, snack and fruits regularly," said Ryu, guiding me to the resting place on the rooftop of the inpatients' block, which was planted with various kinds of flowers. There I could see a panoramic view of the hospital village.

Indeed, the hospital was very wonderful. Mishel Labi, president of France-China Foundation, recorded his impressions in the visitors' book, "Looking round the hospital I am very impressed.

Medical science plays an important role in improvement of the people's health. In particular, the eye is the most important for man. Congratulations."

Kim Ryong Gwan, resident in Neighbourhood Unit No. 33 in Junghwa County town, North Hwanghae Province, said, "While receiving treatment in the hospital, I've realized anew the advantages of our socialist health system which takes full responsibility for the people's life and health."

I left the hospital, wishing it would contribute much to improvement of the people's health.

Pak Yong Il

Aware of Their Duty

DAYS AGO I, AS *KOREA Today* reporter, visited the Breast Tumour Institute of the Pyongyang Maternity Hospital on the occasion of the 5th anniversary of its foundation.

First, I dropped in at the Koryo therapy department because I heard from lots of women that the doctors of the department are renowned for their great medical techniques. Sonu Hyok, chief of the department, opened his explanation by saying that since inauguration the institute had made rapid development and accumulated rich experience in treating mastopathy and breast cancer and dealing with problems after breast cancer operation by Koryo therapies. He continued, "Classic Koryo medical books give prescriptions based on the use of Koryo medicinal herbs like celandine, barrenwort, yam and dandelion for treatment of breast diseases. Using the traditional medicine, my department has cured lots of patients by different treatments—oral administration of medicinal decoctions and Koryo drugs made from natural Koryo medicinal herbs, application of Koryo drugs to diseased spots, acupuncture and moxibustion, cupping and electromagnetic therapies—suited to each of patient's physical characteristics."

A woman who comes from Central District, Pyongyang, had suffered from mastopathy for over 10 years because no drugs or injections were effective for her. But now she was completely cured by application of Koryo drugs, medicinal decoctions and acupuncture and moxibustion.

A woman from Tongdaewon District, Pyongyang, was struck with wonder when she was cured by the combination of application of Koryo drugs and acupuncture for her mastopathy which had shown little improvement with different hormone preparations including tamoxifen.

Then I dropped in at the treatment room. There were some

patients undergoing treatment of cupping and manual therapies. Among them was Kim Mi Song, a woman from Hamhung, who was diagnosed as an early cancer case and asked to have an operation three years ago. While she was receiving treatment based on Koryo therapies in this department, she got better, and now she felt sure of her recovery.

Each doctor in the department has acquired one special curing technique or two while they closely combined their research work with clinical treatment. Jon Chol Min, the doctor in charge of Kim Mi Song, said, "I'm sure I can make Kim get well. Based on my experience in treatment of this

search room, but I could not meet any of the doctors because they were attending a conference to examine a thesis. So I met Ri Chong Won, head of the research institute, who told me some new diagnostic and curative methods which have been in good use.

They introduced the diagnosis using endoscopy and photography of the lactiferous duct and other methods, and improved the quality of patients' life by developing several operation methods like removal of lactiferous duct and prosthesis of breast.

In this course, the number of doctors with academic degrees or titles has increased several times. Ri said, "It's just the beginning of



kind of cases, I've already found the precise spots for acupuncture for her, and I'm combining it with the finger-pressing therapy, which is very effective for her disease."

Then I could hear a number of examples which proved the effectiveness of Koryo therapies in treating patients who could not turn to aphoxides because of lack of immunity after operations and who had motor disturbance in arms after operations. The goal of the department is to cure an advanced cancer by Koryo medicine.

I went to the mastopathy re-

our work. We are all conscious of the policy of the State that set up such a wonderful institute for women. It is our duty to help women work well for the society and their families in good health. That's why we are all engrossed in thinking and studies."

Seeing patients confident of life in a calm frame of mind in the modern research institute that was arranged well to suit the women's feelings and sentiments, I could feel the deep concern and devoted efforts of the doctors.

Rim Ok

Dream of Table Tennis

Circle Members

RECENTLY I VISITED Namsin Primary School in Songyo District, Pyongyang which is famous for table-tennis, for coverage. Its pupils ranked within the top three places for more than a decade in every national table-tennis contest thanks to their instructor Choe Yong Hui. I could trace their assiduous work for victory in her diary.

Doldrums or Innovation (June 1, 2014)

I thought a lot watching a video of World Table-Tennis Championship games. The leading players in the world ranking managed their games with much composure using their powerful offensive potentials based on varieties of drives even when they were losing a score temporarily. Victory found its way to them after all. By the existing method of instruction, I may be an excellent table-tennis instructor. However, if I taught them only basic techniques sticking to the idea that they are ten-year old pupils, when on earth could they reach the level of the world table-tennis techniques developing so fast? In keeping with the developing trend of the world table-tennis which decides victory or defeat by faster spinning and speed, I must introduce a new training method. I'm afraid I may be too ambitious to make my trainees win the coming games for imperfect attainment of technical skills. I should not confine myself to teaching only basic techniques. There will come an innovation when I have the view that I have to rear members of the national team.

What kind of training method should I adopt to teach high-level techniques including drive to



pupils, who are too young both in technical level and physical age?

Difference in Happiness for Win (June 30, 2015)

I changed warming-up exercises into music-based rhythmic movements suited to the pupils' ages and mental state and improved the method of bodybuilding. After the daily training I let them look back on how conscientious they were in the day's drill looking up at the national flag carved on the front wall of the training hall while singing the song *Paeon to the Motherland*. One boy said that he became tearful besides himself while singing the song, and another said he felt as if he were standing on the winners' platform. There came a good result. My pupils won by an overwhelming margin in table-tennis at the 9th national games of sports classes of primary schools. Those who had made me disappointed at first with uncertain movements after they were taught by new training methods, surprised me with their excellent technical skills and unique and

fierce attacks in the games. Not only rivals and their instructors who had challenged us in the previous contest, but also experts admired my pupils for their performance supported by remarkably higher techniques.

In the past my young pupils acquired technical skills which others can do easily as well but today they have acquired technical skills of world stars—it made me much happier.

Forward with a Dream (June 29, 2016)

This year, too, my school won the table-tennis event at the 10th national games of sports classes of primary schools. Promising pupils were admitted to national sports clubs. Some have already taken top places in international contests. Seeing them, I am proud of my efforts. I'm sure the next trophy is in store for us. My pupils are training hard and hard dreaming of becoming world famous table-tennis aces. My dream is to bring their dream into reality. To the end we are making untiring efforts.

Rim Sang Jun

For the Sake of Tomorrow



IN RECENT YEARS A forest restoration campaign is in full swing in the Democratic People's Republic of Korea. I talked with the officials of the General Bureau of Forestry under the Ministry of Land and Environment Protection on this nationwide campaign on the occasion of the Tree Planting Day. Excerpts:

Now a forest restoration campaign is being carried on by provinces, cities and counties competitively. What is the general target of the campaign and what is important

in its implementation?

Kim Song Jun, deputy director of the general bureau: This year the Ministry of Land and Environment Protection set it as its

general task to plant hundreds of millions of trees which grow rapidly and are of economic value and has pushed ahead with the project.

First of all, timber forests are being created on a large scale. Timber is needed in every sector of the national economy. So we make sure that trees in high demand in socialist economic construction, like Changsong larch and *Pinus rigida*, are planted.

Next, tens of thousands of hectares of forests for fibre, paper and firewood production will be created. Forests for firewood pro-

duction will be formed mainly with acacia, which grows fast and has a high caloric value, as well as bush clover. And thousands of hectares of forests for oil and fruit production will be created.

If tree planting is to be carried on nationwide, the supply of saplings will be an important matter, won't it?

Kang Hyon, director of a department: The result of this effort depends on the production of saplings. In order to ensure the campaign a success, the ministry is striving to consolidate the material and technological foundations of the tree nurseries in provinces, cities and counties so that they can produce hundreds of millions of saplings every year. They are introducing the method of growing saplings in vessels. This method ensures 95% of their survival rate.

They are improving the role of their scientific and technological ►

Saplings are grown in numbers at nurseries.



“Mushroom Doctors”

IN EARLY 2016 MANAGER Kim Song Ung of the mushroom production base under the Ryongsong District People’s Committee saw that production at the base was not satisfying the increasing demand for mushroom. He found that the conventional

owing to pollution.

He sometimes visited other mushroom farms to inquire into the state of their production and sometimes studied data till late at night in the Grand People’s Study House. In the course of this, he began to pay his attention to the fact that in his unit manual labour had only been mechanized and the production processes were all based on folk methods. A new method was needed. He continued thinking, and came to an idea that it would be great if the period of culture process was



production processes including spore production, substrate preparation, fungi inoculation and incubation had taken months and required a large production area. This had created a series of difficulties—varying growth speed of fungi according to seasons and declining productivity

reduced. He intensified research, and discovered that deep culture (liquid culture) is quicker in fungi multiplication than solid culture. But it was still no more than a theory with knotted problems.

However, Kim Song Ung decided to challenge the conventional methods. The employees

supported him, and they made a determination to present more than one innovative idea aimed at increasing mushroom production. One of them presented a way of integrating the processes—from spore production to substrate production—into one successive process, and another employee presented an idea of not using heat-resistant plastic bottles, which meant economizing on much foreign currency every year. Now, they became able to increase mushroom production scores of times while reducing the production cycle by one-fifth.

By late 2016, the new mushroom production method was introduced not only in the base but in many other mushroom production bases, and began to prove effective. The new technology was granted a DPRK patent. Residents in Ryongsong District call them “mushroom doctors.” Kim Song Ung says, “In fact we never thought we were doing some kind of research work. We just worked with a mind to supply the people with a larger amount of mushroom.”

Kim Chol Ung

► forces, thus putting sapling production on a scientific, industrial and intensive basis. They are also making scrupulous arrangements to enhance the sense of responsibility and role of their employees who are directly in charge of sapling production.

What do you do to enhance the rate of survival of tree saplings?

Kim Song Jun: What is impor-

tant is to tend planted saplings properly. After a sapling is planted, it is tended for three years according to a plan.

And a number of methods are introduced to prevent damage from drought. Among them is the application of Terra Cotten. And our efforts to ensure the rate of their survival start from the nurseries.

We also manage the planted

trees in a scientific and planned way, take measures to prevent damage by forest fires and pests, and push ahead with afforestation for erosion control. We will turn all the mountains in the country into thickly-wooded treasure mountains in the near future by conducting the forest restoration campaign more vigorously.

Pak Yong Il

Natural History Museum (2)





WE MET CURATOR KIM YUN GYONG ON the first floor, which consists in the exhibition of animals, showing classification and ecology of animals that exist on the earth at the moment. Kim said it is the biggest section in the museum, which occupies 5 600 square metres. Roughly divided into areas of animal classification, animal ecology, animals and our life, and animal diversity, the section has on display more than 25 000 articles of over 3 000 kinds including the Korean national bird goshawk and the Korean national dog Phungsan, said Kim.

We first entered the division for Protozoa and Mollusca in the Invertebrata area. On display there were structures and shapes of major classes and typical kinds of Invertebrata including Protozoa, the lowest-grade unicellular animals, and Mollusca such as squid and octopus. And there were also on show amoeba, paramecium, euglena, which are typical kinds of Protozoa, and cephalopod, shellfish and gastropod, typical kinds of Mollusca. The curator said there are over 40 thousand kinds of Mollusca on the earth, of which over 500 kinds inhabit Korea. On an exhibition stand were tridacnas, the largest kind of shellfish which is the heaviest among shellfishes, and have a distinctively wavy surface. The curator said the tridacna grows 2 cm long a year by eating plankton and lives for dozens or one hundred years in the layer 20 metres deep under the sea where there are corals, sands and gravels. Since the kind has been reduced in number due to the hunting for purposes of food, ornament, commerce and curio, it is ►





- ▶ now registered as international protected animals.

We went over to the Arthropoda division. Here I could see lobsters and crabs which are animals with legs around their mouth, Branchiopoda of the pagurian species and Chelicerata including animals with chelae like spider, scorpion and limulus, and Polypoda like large centipede and millipede.

We entered the Echinodermata and Protochordata division. The curator said the division shows the process in which the Echinodermata and Invertebrata evolved into Vertebrata.

On the round wall of the hall was shown Echinodermata like starfish and sea urchin and Protochordata like sea squirt against the background of the marine ecological environment. The curator said Echinodermata is known to be divided into over 6 000 kinds around the world, of which roughly 100 kinds are to be found in Korea. Now we entered the fish division of the vertebrate area. There were on display flatfish, herring, carp, rainbow trout and other typical species of the Osteichthyes on one part, and a basking shark and another shark which belongs to the biggest kind of sharks on the other. We could see e-interfaces there, too, as we had done in several other halls.

There we saw a little pupil studying about sharks through an e-interface. He introduced himself as Pak Jin Gon, a third grader at Ansan Primary School, Phyeongchon District. He said that in the museum he learned more about appearance, size and physiological property of whales which he had seen only in films and pictures. He added he would work hard to be a fine zoologist.

We also went to the Amphibia and Reptilia division. There we could see frogs, salamanders, caecilians, sphenodonts, tortoises, crocodiles and so on. What was particularly interesting was a dragon lizard, the biggest kind of lizard. The curator said the dragon lizard is 3 metres long, weighs 150 kg and can

devour a deer or a boar at once.

In the birds division is displayed a goshawk, the Korean national bird. According to the curator, Koreans used to tame goshawks to use them for pheasant hunting from of old. There are many proverbs and stories about goshawks, and paintings showing the traditional custom of pheasant hunting with tamed goshawks are to be seen in Anak Tombs Nos. 1, 2 and 3. The goshawk was decided as the national bird of the DPRK in April 2008. And a good many birds living in several continents including Eurasia were on a number of exhibition stands by countries and regions.

Now we turned our step to the division of Mammalia, the highest class of animals. There were exhibited specimens ranging from monotreme, the lowest-grade Mammalia, to Primates, the most developed Mammalia kind in order of evolvement. There was also the Korean national dog Phungshan. The Phungshan was decided as the national dog of the DPRK in November 2014. It is 50~55 cm tall, weighs 20~25 kg and lives for some 11~12 years. It comes from Kim Hyong Gwon County, Ryanggang Province and is widely distributed in northern highlands centring on the county. Since it is clever and tenacious, Koreans made the most of it in hunting. It was registered as state natural monument under the DPRK policy of nature conservation.

We went over to the division where marine mammals including humpback and Pinnipedia are exhibited. The whale was very large, indeed. The curator said humpbacks are usually 10~18 metres long and live in groups or alone and devour fishes. Now we looked round the area of ecology, which is divided into parts of the Arctic, the Antarctic, tundra, temperate forest, rainforest, desert and savanna. The more we saw, the surer we became that the museum would give the working people and schoolchildren a lot of knowledge. Now we went upstairs. □

Smart Leg (1)

“WHERE ARE YOUR shoes?”

Feeling his mother's voice turning sharp the boy, with knitted eyebrows, muttered something under his breath.

“Speak it out,” his mother ordered.

“I say I've got them,” the boy grumbled. He was being disobedient, just stroking his bulging belly—there must be something in it.

His mother, judging there must be a reason, took him by the shoulder all of a sudden and took out straw sandals out of his jacket.

“Oh, my God!” she let out a groan bitterly, for she saw a bundle of worn-out straw sandals instead of the new pair she had put on him that morning. “You've made a ball again with your shoes,” she cried. “You are really crazy—inveterately.”

The boy who made a ball with straw was Ho Juk San, who later earned the nickname of “smart leg” from the Korean people. His name is still enshrined in their mind.

Ho's family came from Kilju, Korea. In the early 1920s they left their home town and emigrated to Yanji County, Jilin Province, China. Like all other Koreans in Japan-occupied Jiandao, China before the liberation (August 15, 1945) of Korea from the Japanese imperialists' military occupation, the Hos were subjected to humiliation, insult and toil everywhere they went. While wandering about Ho's parents had Juk San in Suinan village, Longjing in

1924 and settled down.

Though they tilled land to the bone, they were always poverty-stricken. Hoping to send Juk San to school, which they had been unable to do for their first three sons, the parents toiled and moiled. Thanks to their effort, Juk San could go to primary school. But apparently the boy was just mad about football, never minding his parents' intention.

Actually, Ho was counted as one of top students in his class, but as he was such a character that was reluctant to boast himself, his parents misunderstood that he was obsessed with football, not studies. Juk San was always superior in studies to Japanese children and those from rich families as he was exceptionally clever, but he couldn't join in playing football as he did not have a ball. So, when he saw a roll of straw ropes on his way to Longjing to sell firewood, he conceived the idea of straw ball. *I hate you empty-headed guys proud of your balls. Now I'm going to outdo you with my straw ball*, Ho decided.

He stretched straw ropes in two lines in the yard of his hut and hung straw balls at intervals of one metre at different heights on them. Then, he kicked the balls on his way from home and back. So the yard just looked like a straw-ball stand. It was his daily routine and individual conscious training to kick the swinging balls or trap them in the air. The main task of his training was to kick the ball in the air. He hung the ball from a tree and practised turn-around kicking strenuously.

As a result, nine of his ten kicks sent the ball to the direction he wanted and, in particular, the success rate of kicking in the air was very high.

Now he decided that not only he but also all other children in the village had to learn football hard to display the mettle of the Koreans. After school he led the boys to the riverside and had them train on the sandbank. Gradually Ho Juk San was determined to demonstrate with football what kind of people the Korean is, and his mother encouraged him, saying, “You must win. You must surely beat off those rogues at any cost who have taken our hometown and are killing innocent people mercilessly. From now on I'll never trouble you.”

All the family and all the villagers turned out to offer help. When they had special dishes they brought them first to the football players, instead of their own children, though they were short of provisions. Some mothers prepared at least thin gruel for them and waited until they finished the day's exercise to serve the food. All of the players eagerly learned football skills, but they could not be a match for Ho who was the captain of the team and left-footed player. His left-footed skill was magical. Especially, the skill of managing the ball in the air was unimaginable. In shooting the ball to the goal, other players succeeded in shooting it to the corner only eight of ten times, but Ho always sent the ball to where he wanted. Though people praised

- him for his ever-improving technique, he was not content with it, but ceaselessly honed the skill of turn-around kick in the air and jump heading—both of his forte.

The story of the Korean pupils' assiduous training spread across the town of Longjing, and even grown-ups had heated argument about the would-be winner of a coming match. Before the game a strict lookout on the Koreans was enforced in the town and its vicinity, and the scheme of merciless crackdown was announced. In the school, too, groups of Japanese students attacked and insulted individual Korean students at random.

At that time, there was a coal-miner staying at the home of Sang Jin, Ho's friend. Named Choe Sung Hwan, he used to tell plainly the Korean people's culture and tradition and the current situation. Now he said, "If we yielded to the Japs and sat idle, their outrages would get worse. You know wolves recede when they are faced with stronger opponents. But if the opponents show any sign of uneasiness, the wolves make a fiercer attack. Join your hands, and remember that only courageous counterattack will bring you victory." Hearing the words, Ho and his teammates made up a firm determination to win victory by fighting with concerted efforts even if there were unexpected threats.

At last, the day of competition came. It was worth seeing. The ground of the school was crowded with the people of all walks of life.

First, the Japanese players in white uniforms printed with red stamps on the back and expensive sports shoes entered the ground. The Japanese spectators raised wild cheers, flying their flag. Mo-

rioka, the captain, and all other players wore a white band—printed with a red spot—across their forehead. They looked like samurais in a decisive battle.

Now the Korean players appeared. Amidst the playing of cheering music played by Kim Ryong-led brass band of the Longjing Middle School, the team whose captain was Juk San walked into the ground full of courage. All the Korean spectators rose up as one, cheering and giving them a big hand. Though the Korean players were not in as good uniforms and shoes as the Japanese—they were wearing simple uniforms and straw sandals—their faces were filled with beaming smiles.

The two teams stood in a line in the middle of the ground and made bows to all directions. Then the game started with the Japanese kick off.

It was a seesaw match. Tashashi Morioka and Nida Aizawa of the Japanese team, who were inside forwards, tried sharp penetrations on the right and left sides, and sometimes Isokichi Okada, centre-forward, created a danger with his threatening assault. In the Korean team Ho Juk San, Kim Sang Jin and the tall boy Pak Chun Ung, as three-pronged spear, sought a chance attacking in different directions.

Towards the end of the first half when a Japanese defender, who was in charge of man-to-man defence against Ho, came up, Ho skilfully kicked the ball forward over his opponent's head and dashed toward the goal. As Ho was no more than 20 metres away from the goal, the Japanese defenders rushed up to check him, giving up their task of man-to-man defence.

Narrowly kicking the ball up to his knee in quick succession, Ho pierced between the defenders. Then he made a cross pass to Sang Jin who was dashing forward to the goal area. Now Ho ran forward swiftly. Sang Jin, in his running posture, kicked the ball from Ho with his right foot. But the Japanese goalkeeper with narrow eyes fisted the ball, which flew toward Ho. The moment the ball was passing his side after a bump on the ground, Ho made a turn-around kick with his left foot. It happened in an instant, and the goalkeeper was confused only to see the ball go straight into the right corner of the goal.

"Goal!" the Korean spectators, who had been watching the game with breathless attention, raised a storm of cheers, springing up from their seats in excitement. The people, who had left their hometown owing to the Japanese imperialists' military occupation of Korea and suffered so much troubles and humiliation, were shedding tears of joy looking up to the sky. They were happy they had sustained their lives to see this scene.

In the second half the Japanese team launched an all-out attack as had been expected. When their desperate attempts failed time and again because of the resolute efforts of the Korean team's defenders including To Myong, Morioka lost his temper and openly cried to his teammates, "Listen, guys. Break the ankles of the opponents."

When Juk San took the ball, the Japanese players on both his sides threw themselves at the same time to kick his legs.

(To be continued)

Korea's Meteorological Culture

THE KOREAN PEOPLE HAVE MADE effective use of the country's meteorological conditions in their production activities and everyday life since old times. In the days of old when scientific and technological means were still unavailable to study atmospheric phenomena, they relied on observations and practical experiences to predict climate and weather. They handed down to posterity their ways of weather forecast in such sayings as *Evening glow predicts fine weather and morning glow, rain.*

In the period of the Three Kingdoms (Koguryo, Paekje and Silla) administrative organs of the state were established for astronomical and meteorological observation, and the astronomical observatories continued to record the results of their observations. This is clear from the fact that the part of Koguryo in *Samguksagi* (Chronicles of the Three Kingdoms) contains 29 data concerning astronomical and meteorological observations, and a lot of information about cloud, fog, frost and hail.

The Chomsongdae Observatory in Kyongju (the astrological observatory built in Silla in the first half of the 7th century) still remains to show how astronomical and meteorological observation was done in those days. Preserved in its original state, the observatory consists of over 360 granite blocks that indicate one year each. It is about nine metres high; on top of it were placed equipment for the observation of climate change and movement of celestial bodies.

In the period of Koryo (918–1392) meteorological observation developed further and became systematized on the basis of the achievements and experiences of the foregoing period. In its early years the feudal government of Koryo established *Thaebokgam* and *Thaesaguk*, special departments for astronomical and meteorological observation, and posted with specialists to carry on observations all over the country. To the west of Manwoltae (remains of the old-time palace) in Kaesong remain five buttresses of an astronomical observatory built in the period of Koryo. Little is known of the observation apparatuses installed there. However, *Koryosa* (History of Koryo) has detailed records of such meteorological and astronomical information as the sunspot, solar and lunar eclipses, and the movements of the moon and stars. This affords a glimpse of the rather advanced level of astronomical and meteorological observations for the period.

During the feudal Joseon dynasty (1392–1910) regular meteorological observation began with the development of maths, physics and other scientific branches and the introduction of various observation

tools. In August 1441 a rain gauge made of iron was invented and used to measure precipitation. Later, it was developed on several occasions. The world's first scientific observation equipment, it had fine graduation on its tube. Such gauges were installed at the government offices in the capital city and provinces, and relevant data were reported to the central authority on a regular basis. This system continued to operate until the closing years of the dynasty.

Notable advances were made in the development of meteorological theory. Ri Ik (1681–1763), a scholar of the Silhak (practical learning) school, advanced a new theory on the crystal structure of snow, and others of the same school presented progressive theories on hail, ice, snow, rain, sea and temperature. In the latter half of the feudal Joseon dynasty, valuable meteorological books such as *Soungwanji* and *Phungungi* were published.

All these achievements made by the Korean people in the past are now preserved as part of the country's invaluable assets according to the policy of the Workers' Party of Korea on preserving national cultural heritage. □

A Chomsongdae observatory (model).



Inscriptions on Metals and Stones

THE KOREAN PEOPLE HAVE CREATED A brilliant culture in their long history. Their national cultural heritage includes inscriptions on metals and stones.

To hand down to posterity important events and facts of historical significance, the Korean people carved them on plates of copper, iron, gold, silver and other metals or on stones. They were varied in kinds with rich contents. Some kinds of old inscriptions on stones are found even now in all parts of the country including Pyongyang and Kaesong. They were created in different times, showing the social system of each period and social and historical facts including the political and cultural lives and customs of the people in a broad and diversified way. Among them are new documents of scientific value. In particular, the inscriptions on metals and stones in the period of Three Kingdoms (277 BC–the mid-7th century) including the Koguryo dynasty (277 BC–AD 668) contain important materials indispensable to clarifying the Korean history and culture in depth. Among those of the period of the feudal Joseon dynasty (1392–1910) are plenty of valuable stone monuments showing the patriotic spirit of the Korean ancestors against the foreign aggressors.

The Monument to the Hyonhwa Temple.



The Korean stone monuments in the Middle Ages (277 BC–1860s) are distinguished in their shapes and refined as objects of formative arts. Typical of the stone monuments of Korea was that the monument body was placed on the back of the stone turtle and then the head decorated with an ornamental dragon was placed on the body. This style was most developed in the first half of the Koryo dynasty (918–1392). The characters carved on stone monuments are of very excellent brush strokes showing vividly the high cultural attainments and artistic skills of the Korean nation. They are valuable legacies of the brush writing art. Therefore, the inscriptions on metal and stone monuments are of great merit as data for scientific research and also as works of formative arts.

Lots of inscriptions on metals and stones—the monument to the mausoleum of King Kwanggaetho of the Koguryo dynasty, carved stones used in the construction of the walled city of Pyongyang, the Pyongyang Bell, the monuments to the Great Victory in Pukgwan and to the Hyonhwa Temple—are important objective reminders of the long national traditions of the Korean people. □

The Monument to the Great Victory in Pukgwan.



Han Sok Bong and His Mother

HAN SOK BONG (1543–1605) was a celebrated calligrapher well-known in and out of Korea during the feudal Joseon dynasty. In the summer of 1559 he, still a boy, was returning home after the lapse of seven years. He had left his home when he was nine years old under promise to stay away from home for ten years while serving his apprenticeship in calligraphy.

“Oh, how come you’re back home already?” exclaimed his mother in surprise rather than glad to see him.

“The teacher says I’ve learned enough and tells me to return home to support you well. So, I’ve come back three years earlier.”

“Now, then, let me see if you write a good hand,” said the mother.

At this, the boy thought he would show off his calligraphic skills and rubbed down an ink stick and spread a sheet of paper before him, taking up a writing brush. Seeing this, his mother asked him if he was ready.

“Yes, may I go ahead?” the boy was on the point of writing off on the white paper.

“Wait,” the mother stopped him. “I have to prepare myself, too.” With this, she put a stick of rice cake on the chopping board lying on a large wooden basin and took up the kitchen knife.

“Now,” said the mother, “let’s compete with each other. I’m slicing all the rice cakes in the basin and you’re writing all over the paper in the dark room with the light put off to see who is the better hand—I in slicing and you in

writing.”

This was something quite unexpected for the boy. He could not help it but to write on the paper by feeling in the dark like a blind man. He was unable to see anything and so it was impossible for him to give full play to his writing capacity. He was desperate in the competition into which he was lured awkwardly by his mother. Soon, the regular sounds of the kitchen knife slicing rice cake stopped. The lamp was lighted.

“Now compare the first, middle and last batches of the sliced rice cakes. What do you say?” said the mother.

The son compared rice cakes in the wooden basin one by one. They were all alike in size and thickness. However, the characters of his writing were diverse in size and their strokes were all untidy.

“Is that what you have learned?” the mother demanded. But he had no excuse.

“Go back right now. Come home after learning for three years more,” ordered his mother.

“Mother, but I can’t leave you alone. I’ll continue calligraphic learning at home while looking after you. Please let me fulfil my filial duties.”

“Filial duties do not mean relieving one’s parents from a hard life but mean bringing joy to them. Your father wished you would be a noted calligrapher, but how can you make me happy today without meeting his wishes?”

The next day, Sok Bong left his home with a firm determination to fulfil his parents’ desire without fail, and went up to Han-

song, the capital city. He called on Sin Hui Nam, a war councilor widely known as a calligrapher, and became his pupil. He devoted himself to mastering the powerful strokes of the brush rather than attaining tricky styles of calligraphy.

In the course of three years when Sok Bong was absorbed in improving his calligraphic techniques, a rumour about his unique hand spread in the capital city. Hanging scrolls of his calligraphic masterpiece appeared in the houses of high-ranking officials and even folding screens in the government offices bore characters from his writing brush.

After serving three years of apprenticeship with the calligraphic master in Hansong, he returned to his mother in Kaesong. That night he made a challenge to his mother for another competition in darkness saying that he was sure of winning it this time.

“If so, there’s no need for it in my view,” said his mother. “Three years ago, I tried to see whether you’re as skilful in your calligraphy as your mother in my rice cake dealing. But now, as you say you’ve mastered the calligraphic art, what’s the need of competition? I’ve heard rumour is going round in Hansong that you write a very good hand. That was really a happy news to me quitting all the hardships and cares of my life in a moment.”

Later, his calligraphy won fame in neighbouring countries, too.

Ri Song Chol

Mt. Myohyang (4)

Piro Peak

PIRO PEAK, 1 909 METRES above sea level, is the highest of the numerous peaks in Mt. Myohyang. The top of the peak has some rocks and a flat grass field. Various flowers are in full bloom in July and August, not in spring because of low temperature. So, while it is early summer down on the shores of the Hyangsan Stream, it is spring now for the flowers on the top of Piro Peak. Creeping pine-nut trees cover the ground from Piro Peak to Chilsong Peak to southeast. As it is the highest peak in Mt. Myohyang, it will allow you to have a panoramic view of mountains and fields far away across the Yoltusamchholli Plain to the vast expanse of the West Sea of Korea.

All along the lane up to the peak are many famous waterfalls and noted places of scenic beauty.

The Chonthae Falls cascades more than 20 metres down the cliff, the water coming from the rapids flowing off Sokka Peak and over the southern slope of Wonman Peak. The wide waterfalls shoots down the face of the big rock before passing a two-metre deep hollow and falls down the cliff again. At the bottom of the falls is a pool of blue water (over 3



Joyak Rock on Piro Peak.

metres deep) in a cloud of spray.

The Isonnam (Two Fairy Boys) Falls, 22 metres high, is situated in Chonthae-dong. The water falls down in two currents over a sloping rock, striking against a ledge and sending up spray. At the bottom of the falls is a pool, 3 metres deep. The water falls to fill the first pool and then slides over the rock to fill the second pool before flowing down the ravine. In the rainy season, the two cascades join together, covering the whole cliff. On the rock to the left of the waterfalls stands the semicircular Sonnam Pavilion resting on three pillars.

Next comes Paegun (White Cloud) Rock towering above the forest with fleecy clouds girding its waist, from which came its name. The rock commands a bird's-eye view of the chains of peaks all around. The place is fragrant with cypress, where you

can have a look round over all ravines and peaks such as Sangwon Ravine and Manphok Ravine along the Hyangsan Stream. To the north you will see precipices and peaks made up of rocks of fantastic shapes such as Wonmanbong, Sokkabong, Chonthae-bong; to the south peaks like Paeksan, Kalbong, Sirubong, Munphilbong resembling many horses on the run; to the east Chilsongbong, Kangsonbong, Totdaebong and other peaks. So there is an old saying that warns people against commenting on the charm of Mt. Myohyang before climbing Paegun Rock to have a look round. In particular, when fleecy clouds appear along the ravines, many ravines of the mountain would disappear into the clouds excepting high cliffs and peaks soaring over the clouds. Further, you will see the beautiful autumn scenery of ►

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

The Mangyong Falls is in the ravine of Chilsong-dong. The name originated from the fact that it has a kaleidoscopic view. It is 20.9 metres high with 66.6 metres of watercourse. The water falls down in two currents reminiscent of two rolls of white silk hanging down from the cliff, making a deafening roar. At the bottom of the falls are pools one after another along the stream.

The Saja (Lion) Falls is 12.7 metres high with an about 69-metre-long watercourse. The water falls down striking against many ledges making loud roars. It falls in several currents, some sloping down over steep rocks and some sliding down striking against ledges, sending up spray. At the bottom of the falls is a big pool with a legend that lions

would come there to have a bath in summer. Above the Saja Falls are the Unsil (Silver Yarn) Falls and Sahyang (Musk) Pond. The Unsil Falls is 10 metres high and 30 metres long. The water slides down over the rock and then strikes against a ledge and splashes before turning left to fall down over the 20-metre incline of a rock. Upwards of the falls is Sahyang Pond, a rather bigger one in Mt. Myohyang. A beautiful pond, it is 25 metres wide, 20 metres long and 2 metres deep. It has a legendary tale that the large flock of musk deer living in the mountain would come in couples to the pond to have a bath, hence the name Sahyang Pond.

The Chilsong Falls, 75 metres long, is a magnificent falls. As in the case of the Ryongyon Falls in Sangwon Ravine, the water slides down over the sloping rock, but the volume

The Kumgang Hermitage.



Isonnam Falls.

of water is far larger than the Ryongyon Falls. As it rushes down the deep hollow channel on the cliff, it falls fast. Under the falls is a triangular pond of blue water, 3 metres deep. As the pond is located over 1 000 metres above sea level, its water is as cold as ice water even in the summer.

The Kumgang Cave is a natural cave in the Habiro area below Piro Peak. It is 3 metres high, 10 metres long and 13 metres wide. In the cave stands an old strange-shaped Kumgang Hermitage. Going round the eastern wall of the cave, one will come to a spring called Myongan Spring.

Pak Thae Ho

National Intangible Cultural Heritage (4)

Kwajul Making

KWAJUL WAS ORIGINALLY THE GENERAL name of national cakes such as *yakkwa* (a kind of cake made of wheat flour, honey and oil), *tasik* (patterned savoury cake) and *kangjong* (fried glutinous rice cake). As time passed, kwajul came to mean a single kind of cake. When the Koreans began to make kwajul is uncertain, but according to some ancient data it was an indispensable food for wedding ceremonies, memorial services and New Year's Day celebrations in the period of the Koryo dynasty (918–1392), which means it was widely spread at that time.

The cake is crisp, sweet and tasty, and melts instantly in the mouth. The highly nutritious food is formed into broad and flat pieces, each being 7 cm long and 3 cm wide. It is divided into *jat* (pine nut) kwajul and *kkae* (sesame seeds) kwajul according to the kind of coating material.

The method of its cooking follows:

Pour hot water and makkolli (unrefined rice wine) into glutinous rice flour to make stiff dough. Leave the mixture for 10-15 hours to be fermented before steaming it in the steamer. Then, pour raw



soybean juice little by little into the steamed cake while kneading it well. Sprinkle glutinous rice flour on the chopping board, put the cake on it and roll it before slicing it into pieces of a certain size. Then, leave them to go dry for a day. Put the dry pieces in a vessel, and keep them for a night so that they may get soggy. Now fry the pieces and then coat them with liquid taffy, sesame seeds or powdered pine nut.

These days kwajul is made in different shapes and beautiful colours.

Rim Sang Jun

JANG IS ONE OF THE KOREAN PEOPLE'S favourite national foods with a long history.

It is made from bean and salt with zymotechnics. Koreans have long eaten bean and salt, the raw materials of jang, since ancient times. This means jang has a long history. Korean ancestors grew beans and boiled them before feeding the cattle or horses. Once they noticed the animals eat mouldy fallen beans with relish.

Now they intentionally fermented and mashed the boiled beans and mixed them with salt before eating. This was how jang came. It was called the fermented beans in some regions.

Later, people developed soy sauce by mixing the fermented beans with water and salt and leaving them for several days until boiling down the sieved liquid from the mixture. The leftover material was mixed with malt powders and salt to make paste.

Later when they began to grow red pepper, they prepared peppered bean paste, as well.

Like this, as jang was developed into varieties of fermented beans, soy sauce, bean paste and peppered bean paste, it became a special Korean side dish.

Jang, Korean Food

A mural in the early 5th century's tumulus in Tokhung-ri, Kangso District, Nampho City, has a record that people who were mobilized

for the building of the tumulus ate a storeroom of jang along with white rice, meat and wine during its construction—this shows well that jang was already in wide use in the Koguryo dynasty.

Now the Korean *jang* created by the Korean people's wisdom and rich living experience, has become various in kind and more delicious. It is one of indispensable health foods of the Koreans. □

Starting-point for Peace and Reunification

MORE THAN 70 YEARS HAVE PASSED since Korea was divided into north and south by foreign forces. Over the time the Democratic People's Republic of Korea put forth lines and policies for national reunification, which are agreeable to anyone of the Koreans, in reflection of the desire of the nation and the requirements of the times for one Korea. It has endeavoured strenuously for their realization.

Last year alone, the DPRK made sincere efforts to open up a new time of independent reunification while repelling the challenges of the anti-reunification forces at home and abroad. On the contrary, the south Korean authorities, kowtowing to the foreign forces, ignored the north's efforts and proposals while clinging to their sanctions-and-pressure schemes and war moves against it. Thus the inter-Korean relations were driven towards the worst catastrophe. The Korean peninsula is in a touch-and-go situation in which a war may break out at any moment, endangering peace and security in northeast Asia and the rest of the world.

The Koreans, desirous of peace and reunification, demand that positive measures be taken to improve the devastated inter-Korean relations and remove the acute danger of military conflicts and war between the north and the south so as to defend peace in Asia and the rest of the world.

The improvement of inter-Korean relations is the starting-point for peace and reunification, and it is a pressing demand of the whole nation. Any politician, if he or she remains a passive onlooker to the current deadlock between the two sides, can neither claim to be fully discharging his or her responsibility and role for the nation nor enjoy public support—this is obvious truth that was substantiated by the massive anti-government struggle in south Korea last year. Obsessed with sycophantic and traitorous inclinations to pursue showdown with the fellow countrymen in the north, the south Korean authorities drove the situation in the Korean peninsula to an extreme taking advantage of the American anti-DPRK policy all the year round.

The south Korean authorities, pursuing the anti-DPRK policy which may invite nuclear holocaust to the Korean nation, carried out extremely dangerous rehearsals of aggression war under the cloak of “defence” and “annual events” with the mobilization

of a huge force. Thanks to their policy that points to their fellow countrymen as their archenemy a grey cloud of nuclear war is hovering over the Korean peninsula.

Meanwhile they have resorted to every manner of abuses and slanders aimed at offending the north and inciting confrontation. Acts of seeking hostility and showdown against the fellow countrymen cannot be justified on any account, and the malicious smear campaign and other acts of hostility towards the DPRK, all designed for the overthrow of its system and any other “change,” could in no way be understandable in any case.

Today the international community, to say nothing of the general public of south Korea, are paying great compliments for the realities of the DPRK. While admiring the ever improving appearance of the north, the south Korean people are calling their own society “hell Korea” referring to the calamities from the authorities’ anti-popular policies.

Commenting on the changes in the DPRK over the past five years, the AP noted that the DPRK’s political foundation has further consolidated with great progress in the economic, defence and cultural realms.

The realities show that improved inter-Korean relations are the starting-point for peace and reunification. Matters of north-south relations and national reunification should all be settled with the nation’s own efforts to suit the nation’s will and desire for independence in accord with the ideal of “by our nation itself.” Nobody else will, and can, bring reunification to the Korean people.

On December 5 last year some senior civic and public leaders of south Korea proposed it as one of the ten tasks for straightening out the south Korean governance to adopt peaceful reunification as the fixed line of national policy and normalize north-south relations by repealing the “May 24 measures” and bringing the Kaesong Industrial Park back to full-scale operation—so as to ensure peace in the Korean peninsula.

The DPRK is consistent in its stand to safeguard the security of the compatriots and peace of the country without fighting with the fellow countrymen.

Kim Hyon Ju

Imperialist Japan's Scheme for A-bomb Development and Massacre of Koreans (4)

US's Accomplice in Nuclear Development

ON DECEMBER 6, 2011 THE Japanese Internet homepage *Document-Minamata Disease Incident 1973-1995* posted an article which read in part as follows: The Hungnam Factory was the largest electrochemistry plant in Asia. Since it was an important munitions factory of Japan during the Second World War, it should have been the first of all targets to the US military that was so enthusiastic about bombing Japanese factories. However, it was far from a victim of air raids until the end of the war.

When the "Snell Report" was released revealing Japan's nuclear test in the sea off Hungnam before its defeat, the US denied the report to the last. However, recent disclosures show that the US told a lie at that time.

A report from the Japanese *Nishinon Shimbum* dated August 6, 1999 goes as follows: The US military received the information that the old Japanese army had conducted an A-bomb test in the sea off Hungnam in the east Korean peninsula, which is currently the territory of the Democratic People's Republic of Korea, before the end of the Second World War. After the war the Allied Forces command that was ruling Japan conducted a secret investigation into the matter. This was recently known to the public through the American confidential document in the American National Archive, which has been procured by the *Jiji News*. A report of January 16, 1947 prepared by the Counter-Intelligence Corps

of the US forces command in south Korea says that the Japanese military conducted an explosion-including experiment aboard a ship in the sea off northeast Korea and it was similar to an atomic explosion. At the same time a US military report dated December 29, 1950 during the Korean war says that the US military launched air raids to destroy 95 percent of the facilities of the chemical plant in Hungnam.

In August 1945 American intelligence services OSS, MAGIC and ULTLA intercepted Japanese-version communications some Japanese exchanged about the codename of "NZ" and a successful nuclear experiment. American Professor Wilcox insisted that the US intelligence services were already watching Japanese facilities for nuclear fuel processing and A-bomb development in the Hungnam area, and the US dropped an A-bomb in Hiroshima on August 6 six days before the nuclear test date the Japanese navy had planned a long time before.

The US not only covered up the nuclear development of the Japanese imperialists but also helped them secretly. According to the Japanese physician Shin Inoue's article released on September 30, 2008, Ryokichi Sagane who was taught by Dr Laurence in California University played an important role in procuring the general design of a large cyclotron for the Japanese Institute of Physical and Chemical Research, and Laurence was in close connection with Nishina. Having constructed the first cyclotron in the Institute of Physical and Chemical Research earlier in 1937, Nishina planned to build

another cyclotron ten times larger than the first one. Learning it, Laurence proposed cooperation for the plan saying that manufacture of the magnet for the cyclotron would cost less in the US. Nishina ordered a magnet of the same size as Laurence intended to make to the US. It was just for the large 60 inches long cyclotron of the Institute of Physical and Chemical Research which was slated to be completed in 1944. The magnet was completed at the same time as Laurence's, but vacuum and high frequency were troubles. As cast product, the accelerator had gas bubbles and the vacuum technique was inferior. The most critical problem was the high frequency system.

Nishina, hearing the news of Laurence's success in the manufacture of cyclotron, dispatched Yazaki, Watanabe and Iimori to US in early 1940. Despite the crucial situation just before the outbreak of a Japanese-American war, Laurence gave Yazaki-led group the design and treatise. Yazaki also brought a vacuum pump to Nishina. Eizo Tajima who took part in the cyclotron project recorded that Yazaki's group had returned with a conceptional plan and treatise.

Hinogawa, who is engaged in the study of cyclotrons in the world in the 1930s, made close investigation into the relations between California University and the Rockefeller Foundation. He obtained a design of the 60 inches long accelerator on which Laurence had made a report to the foundation. The design was nearly the same size as the general assembly plan of the accelerator remoulded by the Institute of Physical and Chemical Re-

Wrong Hostile Policy Toward the DPRK

MANY COUNTRIES ARE judging the confrontation between the DPRK and the US—incomparable in the size of territory, population and economic power—in their own way. The prevalent judgement is that the US is making a downhill march as a result of its hostile policy towards the DPRK, that it has pricked its own eyes with its finger.

When one looks back on last year, one can easily understand their judgement.

The US thought that the DPRK would have no chance of survival and thus give up if it imposed extreme sanctions once more.

However, what did the year 2016 saw in the DPRK?

The country made a breakthrough in the US moves (to stifle it through sanctions) with a successful first H-bomb test, and then successfully launched the satellite *Kangmyongsong 4*, declaring that it would attain the status of a socialist power by relying on its own strength, technology and resources. It demon-

strated its capability for self-defence by successfully conducting test-fire of newly developed anti-tank guided missile, test-fire of new-type large-calibre multiple launch rocket system, re-entry simulation test of ballistic rocket and static firing test and stage separation test of a high-thrust solid-propellant rocket motor. The following successful test-fire of strategic ballistic missile *Hwasong-10* and underwater launch test of ballistic missile from a strategic submarine and a nuclear bomb test carried out in September last year shattered to smithereens the schemes of the hostile forces including the US.

To look back, successive US presidents, starting from Truman, retired after delivering to their respective successors a heavier burden than their own in relation with the policy towards the DPRK. This is well evidenced by the relations between the two countries in the new century. Bush, who took office at the turn of the new century, clung to hard line military pressure to get the DPRK policy he had taken over

from his predecessor Clinton, out of bankruptcy. His administration intensified sanctions against the DPRK, like financial sanctions and naval blockade, while indulging in nuclear threat and blackmail by placing the DPRK on the list of targets of nuclear preemptive strike. However, those sanctions backfired: they only propelled the DPRK to become a nuclear state. When he was leaving the White House, people sneered at him, saying that he had opened up a prelude of the end of the “sole superpower,” throwing away his promise to make the 21st century a “century of the US.”

Obama, who shouldered a heavy burden of dealing with a newly emergent nuclear state, dreamed a pipe dream. Resorting to the policy of “strategic patience,” he had extreme pressure and sanctions, accompanied by nuclear threat and blackmail, imposed against the DPRK. He thought that the country would change gradually in due course and finally collapse. However, what he did was that he made the

► search—actual photos showed the reconstructed vacuum system, the style of the accelerator and position of the fringe were exactly the same as Berkley’s. At the time the relations between Japan and the US were in an acute situation—a Japanese-American war was a fait accompli and the US imposed strict government control on its export of strategic materials like scrap iron and aluminium to Japan. It does not make any sense that Laurence transferred to Japan nuclear technology and materials essential for A-bomb development with no permission of his government but only for the sake

of his friendly relationship.

Some experts argue that one of the reasons that the US started the Korean war was to destroy completely Japanese atomic weapon production facilities which were under control of Russia in the Hungnam area and attain superiority to Russia in the competition of atomic weapons—more specifically H-bomb—development by frustrating the supply of heavy water and radioactive materials including uranium and thorium to Russia.

Then, for what did the US try to keep in secret the development of nuclear weapon of Japan?

It sought to maintain its superiority in the nuclear armament race in the world with absolute monopoly of nuclear-related information. It also intended to cover up the war crimes of the Japanese nuclear scientists in return for the transfer of their nuclear information the way it overlooked old Japanese Military Unit 731’s germ warfare crimes. After all, it had an underhand plan to make use of Japan as its bridgehead and shock brigade for its strategy of Asian domination.

Thanks to the Americans’ connivance and aegis, Japan’s nuclear ambition is still going on. □

- DPRK a nuclear-armed nation and drove the mainland of the US into the greatest danger. Thus, he had retired from his office, delivering to his successor a heavier burden—to deal with a nuclear-armed nation.

If the US ruling circles, obsessed with their outdated view, do not free themselves from their inveterate hatred but tenaciously resort to its hostile policy, it is impossible to predict the aftereffects.

An expert in the DPRK studies in the Economic Institute of the Russian Academy of Sciences said: Despite the decades-long sanctions by the US, the DPRK possessed a powerful nuclear capability and has achieved successes in economic construction; its people's standard of living has improved remarkably compared to the 1980s; sanctions can not stop its nuclear and missile development nor make it "surrender."

This is a general view of the international community.

As the DPRK has made clear on several occasions, its nuclear forces are an inevitable outcome of its countermeasures against intensified nuclear threat by the US. The DPRK is developing its capability for nuclear strike stage by stage, exerting pressure on the US ruling circles.

Specialists who have long watched the developments on the Korean peninsula are of the opinion that the US has two alternatives—either improving its relations with the DPRK by concluding a peace treaty or having a recourse to the last resort—physical methods. The right to choose one of the alternatives belongs to the US, but the majority of specialists say that the US is well advised to choose the first one, for it conforms to the interests of the US.

The reality shows that the US should regard the ideology and system of the DPRK as a fait accompli and learn to exist together with the country.

Kim Yong Un

The DPRK broke through the American moves for sanctions and strangulation and made a full display of its capabilities of self-reliant defence.



Phyohun Temple

THE PHYOHUN TEMPLE IS in Naegumgang-ri, Kumgang County, Kangwon Province. It is known as one of the four renowned temples in Mt. Kumgang along with Jangan, Singye and Yujom temples. Built in 670, it was first called Sinrim Temple, but was renamed Phyohun Temple three years later.

Originally, there were over 20 buildings in the temple, but now there are only Panyabo, Ryongsan and Myongbu halls and Rungpha, Osil and Chilsong pavilions. All of

them stand along the axis that passes the Panyabo Hall and the Rungpha Pavilion.

The main building in the temple is the Panyabo Hall which is a representative structure with gorgeous architectural decorations and exquisite sculptural arts. Erected on an elevated stone foundation, this building is 14.09m long and 9.4m wide. Topped with a gable roof, it has double eaves. The decorations of the ancon and the cow's-tongue layer on the column with the full-bloom lotus flowers and their buds resemble natural flowers. The slightly gentle curving of the ridge, concave, hip and surface of the double-eaves gabled roof adds smartness to the hall. The building is painted in golden colour.

The Rungpha Pavil-

ion is a two-storey building which is three bays in length and width. Painted in golden colour, it is a double-eaves gabled-roof house with brackets on tapering pillars. The Ryongsan and Myongbu halls to the left and right of the Panyabo Hall, and the Osil Pavilion, painted gorgeously in golden colour, are also gabled-roof houses with double eaves which are all three bays long and two bays wide.

Most of the gabled houses in the Phyohun Temple are evenly distributed along the axis that extends from north to south, showing different features of all buildings and distinctive features of individual buildings.

The temple stands in its original state and is kept well thanks to the state policy on conservation of cultural heritage of the nation.

Kang Wi Song



