



KOREA TODAY

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Happy New Year

DEAR READERS,
Seeing out last year that witnessed significant events with historic traces, we have greeted the New Year of 2020 full of hope and dream.

We extend our sincere thanks and New Year greetings to our readers who have provided firm support and solidarity to the Korean people while acquiring a deeper understanding of Korea and trust in it through *Korea Today*.

Last year was the one filled with unforgettable events for the Korean people who are implementing the five-year strategy for national economic development. Industrial establishments completed projects for domestic production and supplies, and modern scientific, educational, cultural and welfare facilities came into existence, demonstrating the inexhaustible strength and potentiality of development of the Juche Korea.

Gigantic construction projects accelerated as

dynamically as they had in earlier years. Many people in Yangdok County, South Phyongan Province, moved to new homes furnished with all living conditions free of charge. And the grand mass gymnastics and artistic performance *The Land of the People* vividly showed the high level of the country's cultural development.

Last year the Korean people further developed friendly and cooperative relations with the world progressive peoples aspiring to justice and progress under the ideal of independence, peace and friendship.

In the New Year 2020, too, the *Korea Today* editorial board will keep the same pace with the progressive peoples in the world who are striving to attain social progress and development, and peace and justice, and make efforts to give interesting news.

We sincerely wish you success in your work, and your family full of love, hope and happiness. □





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Photo by Ri Song Ik



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Photo by An Kang Rim

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From Mt Paektu

ETHERNAL GENERAL SECRETARY OF THE Workers' Party of Korea Kim Jong Il said, **"Comrade Kim Jong Un is a Paektusan-type general possessed of the personality and qualities of a brilliant commander."**

Supreme Leader Kim Jong Un has an unusual love for Mt Paektu. This is not merely because it is the ancestral mountain from which all other mountains of Korea stretch. He regards the mountain as witness of history to the immortal revolutionary ideology, leadership exploits, indomitable spirit and noble qualities of President Kim Il Sung and Chairman Kim Jong Il.

It can be said that the history of the Korean revolution started just in Mt Paektu.

Mt Paektu (2 750 metres above sea level) located in northern Korea came into being when torrents of lava poured forth about a million years ago, and it is the highest mountain in the country.

It earned its name as it looks like the white head of a giant supporting the sky and observing the universe below his eyes. It is soaring and magnificent, and its weather changes several times a day. In the ancient times they said the weather of the mountain did wonders.

Kim Il Sung, eternal President of the Democratic People's Republic of Korea, organized and waged an anti-Japanese armed struggle with Mt Paektu as its base in order to take back the country from the Japanese imperialists. Thus the mountain became a sacred place where the Korean revolution started.

During the anti-Japanese armed struggle, Kim Il Sung, based in Mt Paektu, often crossed the Amnok and Tuman rivers to conduct a brave struggle in the wide area of Korea and Manchuria. In the course of this he won fame as general of Mt Paektu and tiger of Mt Paektu, and thus the mountain began to attract the attention of Koreans.

The glorious revolutionary traditions of the WPK were established through the anti-Japanese war waged with Mt Paektu as its base. During the unprecedentedly arduous struggle, the fighters protected their leader at the cost of their lives, and carried out without fail the revolutionary tasks given by the leader, through thick and thin.

The anti-Japanese revolutionary fighters' boundless loyalty to the leader, ardent love for the country and the people, burning hatred for the class enemy and indomitable fighting spirit constitute the revolutionary spirit of Paektu. This spirit is regarded as the most precious revolutionary wealth

to be handed down through generations, and the source of ideological and spiritual strength that guarantees the victory of the Korean revolution.

Out of this consideration, Kim Jong Il, as a student, pioneered the path for a study tour of revolutionary battle sites in the Mt Paektu area.

On May 31, Juche 61 (1972), when he climbed the mountain, he said: I am here on Mt Paektu today in the face of a snowstorm because I want to grasp more deeply, though in my mind, what trying ordeals had to be overcome to establish the revolutionary spirit of Paektu that prevailed in the thick forests of Mt Paektu. Only when we look back upon the course of arduous march while facing the harsh snowstorm of Paektu and walking through a rough snowy path like this can we fully understand how difficult it was for the Korean revolution to cut its way by bloody battle. Only then can we overcome with ease any obstacles in the way of our revolution. We have a long journey of revolution to make. To make the long journey of revolution without vacillation, we should not forget the past even for a moment. Let us live and fight in the revolutionary spirit of Paektu for ever—this is my firmer determination today on Mt Paektu, and what I want to tell you.

Whenever he made a great plan and decided it and whenever he was exhausted from work and had to make a difficult decision, the Chairman climbed Mt Paektu to think of the President and make up his mind to carry on the revolution well.

To Supreme Leader Kim Jong Un Mt Paektu is the strategic stronghold for the Korean revolution and the source of the inexhaustible strength of socialist Korea that stiffened his revolutionary resolution to carry on the intentions of the President and the Chairman without fail.

It was over 20 years ago that the Supreme Leader climbed Mt Paektu for the first time. He did so motivated by the Chairman's instructions that revolutionaries of Korea should know about Mt Paektu and that they should bear in mind the revolutionary spirit of Paektu in order to accomplish the revolutionary cause of Juche pioneered in the mountain through generations.

On October 27, Juche 103 (2014) the Supreme Leader climbed Mt Paektu.

That day he said: The Great Paektu Mountains start in Mt Paektu, and if the mountain leading thousands of mountains makes a big movement, the whole country will follow suit. Standing on the top of Mt Paektu, I feel more firmly determined and willing to carry through the revolutionary cause of

▶ Juche pioneered in Mt Paektu.

Saying that the Korean army and people should always live and fight in the revolutionary spirit of Paektu, the spirit of the blizzards of Paektu, which he pointed as the noble spirit the Korean army and people should bear in mind for ever, and the most precious spiritual wealth never to be bartered for any great sum of money or valuables in the world, he added that if they lived in the spirit they would have nothing to fear or difficult to carry out.

One early April morning in 2015 the Supreme Leader climbed Mt Paektu together with fighter pilots of the Korean People's Army who were on a study tour of revolutionary battle sites in the Mt Paektu area. Standing firmly on the summit of the mountain in the face of a cutting wind that was blowing at 25 metres per second, he observed the sunrise over it. Looking at the magnificent sunrise, he said: It's really wonderful. The more I see the mettle of Mt Paektu, the more magnificent it looks. The sunrise of Mt Paektu is something fascinating and beautiful to be found nowhere else. The day in Korea, the country of morning

calm, breaks on Mt Paektu. Only when you climb Mt Paektu against a snowstorm and face the blizzards of Paektu can you really know about Mt Paektu and get more firmly determined to carry through the Korean revolution. The path of climbing Mt Paektu is the one of getting a precious spiritual pabulum not to be compared with the might of any nuclear weapon, and the way to glorify the revolutionary traditions of Paektu and firmly maintain the lifeline of the glorious Korean revolution.

The day after it was reported that the Supreme Leader climbed Mt Paektu together with fighter pilots, *Rodong Sinmun*, the organ of the Central Committee of the WPK, carried a song, titled *We Will Go to Mt Paektu*.

*We'll go whether it is spring or winter
To Mt Paektu, the place dear to our heart,
The revolutionary battle area,
That stiffens our will not to be broken by a storm
And confirms us in our faith.
We'll go to Mt Paektu definitely.
The mountain calls us always.*

▶ The song encouraged the people to visit the old anti-Japanese battle area, and intensified the flame of education in the revolutionary traditions across the country.

Thus the zeal to visit Mt Paektu prevailed in the whole country. Lots of officials, working people, youth and students set out on a study tour to the revolutionary battle sites in the area.

On November 24, 2016 when the whole land was covered with unprecedentedly heavy snow, the Supreme Leader climbed Mt Paektu again in defiance of the severe cold. Seeing the brilliant sun rise over it while dyeing the sky and the earth red, he said Korean revolutionaries should emulate the strong mettle of Mt Paektu if they were to complete their march that had started in the mountain and accomplish the cause of the Songun revolution successfully.

In October last year the Supreme Leader climbed Mt Paektu on a white horse in defiance of the first snow of the year in the area. This was recorded as an event of great historic significance since Mt Paektu is the place where they review the

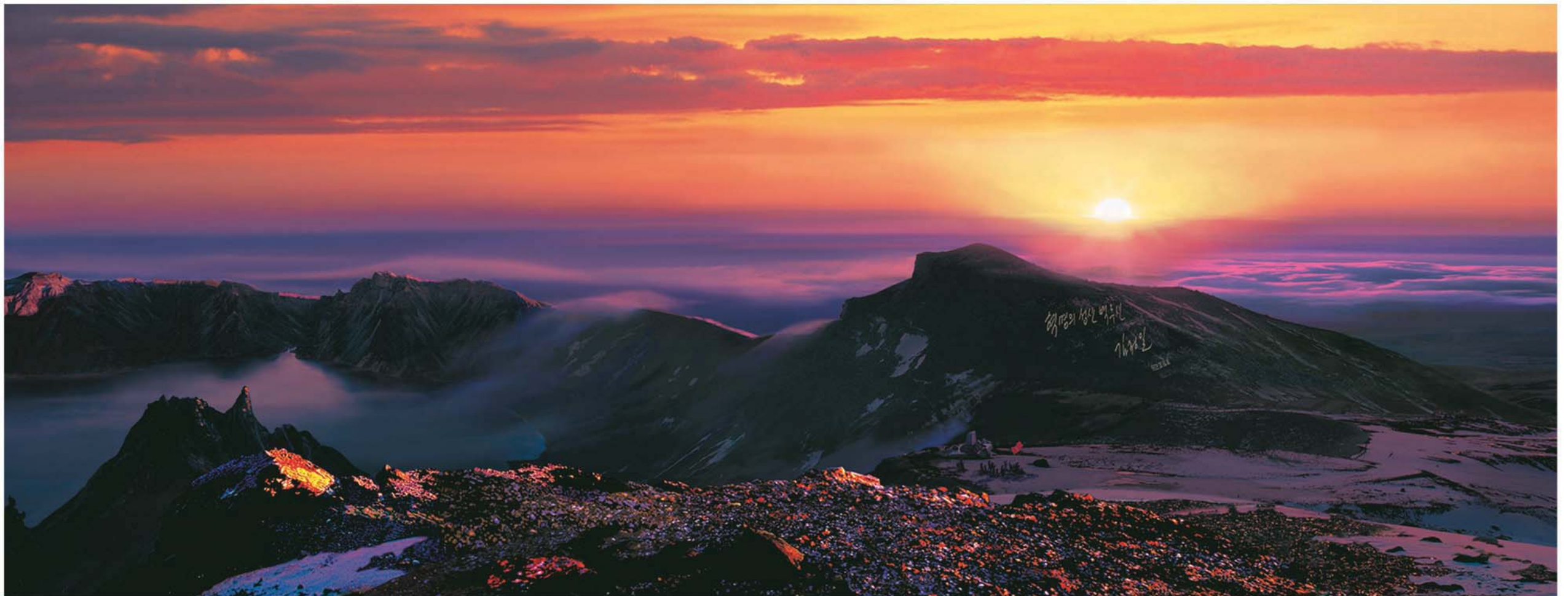
Korean revolution at each stage of its development in the course of working legendary miracles and heroic wonders and where a new great plan is decided.

Seeing the Supreme Leader on the white horse on the top of the mountain looking down at mountains lying range after range, the Korean people keenly realized his great determination to turn socialist Korea into the strongest socialist power to be envied by the world.

His climbing of Mt Paektu imbued all the people with confidence in and optimism about their victory, and made the entire country overflow with revolutionary enthusiasm and a zeal for struggle. And it further stiffened their confidence that they will surely win under his leadership.

The Korean people love to climb the mountain. The sacred mountain serves as a good place where they learn about the strong root of the revolution.

Yom Song Hui



Driving Force of Socialist Economic Construction

THE KOREAN PEOPLE ARE NOW vigorously conducting the Mallima speed movement in response to the call of the Workers' Party of Korea (WPK).

At the Fourth Plenary Meeting of the Seventh Central Committee of the WPK held in April last year Supreme Leader Kim Jong Un said that officials and working people should be inspired to rise up unanimously in the grand march to create the Mallima speed with a strong sense of national dignity and with patriotic enthusiasm.

In order to attain a high goal of the effort to build a socialist power that has entered a new radical stage, the WPK called upon all sectors and units to launch a vigorous drive to create the Mallima speed.

It is the Party's traditional way of work to promote the revolution and construction through a vigorous mass movement.

The advantages and vitality of mass movement were clearly proved in the practice of the Korean revolution.

After Korea's liberation from the Japanese imperialists' military occupation on August 15, 1945, an emulation drive for increased production took place in the country for the purpose of fulfilling and overfulfilling tasks of the national economic plan and ensuring a continuous upsurge in production by giving full play to the creative zeal and enthusiasm of the working people. Then followed the Chollima Movement, the Three-Revolution Red Flag Movement and the movement to create the speed of the 1980s, through which Korea developed from scratch into a socialist state independent, self-sufficient and self-reliant in defence, opening up an era of great prosperity in creation and construction.

A typical example is the Chollima Movement that started as an all-people drive in the 1950s reflecting the requirement of the law that guided social development at that time.

At the time the internal and external situations of the country were very complicated and tense, and there were not a few difficulties.

Then Kim Il Sung kindled the flame of the Chollima Movement, a great all-people forward movement, with a determination to break through the difficulties by relying on the strength of the popular masses. As a result, old formulas and norms were smashed and all reserves for increased production and economization were mobilized. This led to miracles and innovation in succession.

Through the great Chollima upsurge the Korean people accomplished the historic cause of socialist industrialization in a short period of 14 years.

The history of the Korean revolution shows that

it is possible to bring about a continuous leap forward when a vigorous mass movement is under way to create a new-age speed however high the goal may be and even if there are trials and difficulties.

At present socialist construction in Korea is advancing in a very important and decisive stage.

It is the WPK's firm resolution and will to bring about a turning point in socialist construction based on self-reliance by conducting the Mallima speed movement vigorously the way they broke through difficulties and kindled the flame of working miracles by dint of the great Chollima march in the postwar days.

Having realized in practice that they can win victory when they support the guidance of the Party in every stage of the revolution and construction, the Korean people are all out in the Mallima speed movement.

They are striving to promote the development of the economy by relying on their own strength and technology.

The main motive force for economic development is the spiritual strength and creative power of the people who want to go ahead of others.

The Korean people are fully displaying their strong spirit of making their way without relying on others, and their unusual creativity by which to solve all problems by relying on their own wisdom and technology. The country regards able personnel and science and technology as the main strategic resources and means for making a great leap forward in socialist construction.

On the increase is the number of units which pioneer the shortcut to their development by dint of science and technology true to the Party's policy of attaching importance to able personnel and science and technology.

They are paying primary attention to the work of strengthening their own technical force, a force of competent personnel.

Efforts are made to find out and appoint to right positions those who are capable of taking jobs by their own brains, challenging limits and putting forward new ideas, and scientists and technicians are provided with all conditions to give full play to their merits.

And it's become an undertaking of national importance to turn all working people into intellectual type, those responsible for the development of science and technology.

All sectors and units are pushing their work in accord with a scientific perspective while establishing the manner of work based on digital accuracy.

The advantages and viability of the Mallima speed movement lie in that it enables all people and

Emulation Drive for Increased Production Gets Fervent

ARE YOU A MALLIMA RIDER?—THIS IS A question which can be heard in all sectors and units of Korea where socialist construction is in full swing. To answer yes to the question the working people in the country are redoubling their efforts.

It is a traditional mode of leadership of the Workers' Party of Korea to put forward the paragons of the era so that others actively follow their example. Today it has put forward ten paragons of the Mallima era in the van. Among them is weaver Ri Myong Sun of Weaving Workshop No. 1, Weaving Division, Pyongyang Kim Jong Suk Textile Mill.

The distance Ri has run round her looms under the banner of a multi-loom tending campaign for 25 years is equivalent to travelling around the earth 10 times. The total length of fabrics she has weaved is 2 400 km. She is not yet satisfied with the work she has done. To the question *Are you a Mallima rider?*, she answers *Give me more looms*. The workers of the mill are trying to follow the example of the woman who is always in the van.

Workteam leader Ko Kyong Chan of April 5 Pit, Kungol Mine, Komdok Mining Complex, is regarded as pacesetter of the collective in the van of the grand Mallima march. The workteam was organized with those born in 1961, the year when President Kim Il Sung inspected the complex for the first time.

With the passage of time there is a shift in generation in the workteam. Most of its members are ex-soldiers who began to work as miners merely a few years ago. Ko, however, led all the members of his workteam to help one another to finish their

units to advance and develop altogether. All sectors and units of the national economy in the socialist society are closely connected with one another, thus forming an integrated organism. The movement makes it possible to boost not only central industries but also local industries, and rapidly accelerate the development of not only important economic sectors and units but also all others, thus bringing about joint innovations and changes simultaneously. While efforts are being made to create new records and new norms, a drive is under way to exchange achievements and experience and overtake one another.

The WPK initiated the movement not with the aim of accelerating the economic construction alone. The true intention is to create even a single thing

annual national economic plan ahead of schedule. Thus he became a Labour Hero the whole country knows. Everyone follows and respects the miners who connect the workteam's increased production with the destiny of their unit, sector and country, and render distinguished services.

Another example is Labour Hero Kim Myong Hwan, general manager of Pyongyang Kim Jong Suk Silk Mill. The mill is a leading silk production base in the country. It had produced Kil Hwak Sil, a Chollima rider in the 1960s, and now it has given birth to a paragon of the Mallima era.

As Doctor of Economics the general manager gives priority to science and technology in the operation of the mill. Recently it turned the processes for removing the surface of cocoon and selecting cocoons into a flow line, and established a silk spinning process which can treat inferior cocoons and leftover fibre at 100 percent, and a sanitary goods production process. The mill also planted tens of thousands of trees, including fruit trees, around its compound.

In June 2016 Supreme Leader Kim Jong Un visited the silk mill. He then said that the mill as a whole was replete with the Party's policy and love for the factory, and that it was the best one among those he visited until then, and referred to its general manager as an official with great attachment to the mill and an enterprising man whose example should be followed by everyone.

Those who are held in respect and affection by all people for a distinguished contribution to the prosperity of the country out of patriotism include Yun

perfect enough to become a contemporary model and benefit the people practically.

In the country everything is done in such a way as to ensure both speed and quality thoroughly proceeding from the opinion that anything for the people should be perfect enough to be wonderful even in the distant future.

And efforts are being made to not only produce famous goods but also renovate the national economy as a whole with advanced technology and put all sectors onto an advanced level.

The Korean people's zeal to bring about a turning point in socialist construction through the Mallima speed movement is growing stronger day by day.

Ri Jong Nam

► Ryong Sok, leader of Workteam No. 1 of the Pukji Cooperative Farm in Jaeryong County; Han Sung Chan, head of Pit No. 9 of the February 8 Jiktong Youth Coal Mine; Doctor Jo Su Gyong, Merited Scientist of the Resource Development Mechanical Engineering Faculty of the Pyongyang University of Mechanical Engineering; Jo Song Gu, general manager of the Wonsan Power Station Construction Company; Kim In Gyu, department head of the Metal Engineering Faculty of Kim Chaek University of Technology; Pak Pyong Jun, manager of the Sepho County Forest Management Station; and Kim Myong Wol, senior ophthalmologist of the North Hwanghae Provincial People's Hospital.

Besides, the Meritorious Persons of Socialist Patriotism are on the increase, including Pak Hyang Ok, director of the Sunam District Commercial Management Office in Chongjin; Sim Jun Il, leader of the main body workteam of the turbine repair shop of the Pyongyang Thermal Power Complex; Ri Sung Chol, head of the maintenance workshop of the February 8 Jiktong Youth Coal Mine; and Ri Jong Su, general manager of the Wiyon Timber Processing Company. And a campaign to follow their example is going on dynamically.

Prosperity of one's hometown and unit depends on one's own effort, and one should pioneer one's way to live by oneself. Based on this spirit, a collective emulation drive for increased production is being waged vigorously across the country. It is aimed at making one's own native place and unit prosperous and making continued innovations and advance onwards with one's own effort.

The Sinchang Workers' District along the east coast of Korea has the Sinchang Fishery Cooperative counted as a leading unit not only in the east coastal region but also under the Ministry of Fisheries. It has a tangle farm of 20-odd hectares, a resource multiplication ground of over 30 hectares, scores of motorboats and sea culture boats, a processing shop and a cold storage. Though it is a cooperative, it has a full set of facilities to be the envy of fishing stations.

Ten years ago the situation of the cooperative was not good. Its workers, thinking that they should rely on their own strength, tended a tangle farm of 0.5 hectare, and now it has increased to 20 hectares. Tangle farming had been regarded as difficult in the east coast, but they succeeded in it, and made all the farming facilities by themselves. More than that, the cooperative started mixed cultivation of tangle, mussel and *Undaria pinnatifida*. Now they are striving to attain a goal of breeding and stocking trepang, abalone and other non-migratory aquatic animals so as to enrich the marine resources annually.



The workers in Korea are bringing about miracles and innovations on all fronts of socialist construction.

The Ryangdam Cooperative Farm in Unchon County has rather a small acreage of field though it is a rural area on the west coast. Hillocks rise scattered in the area, and most of their soils are weathered gneiss, so they are not good for farming. And the farm has no special natural resources.

It, however, has its own clear strategy to increase agricultural production and raise the peo- ►



► ple's living standards. "Suit the characteristics of our region!" With this stand the workers of the farm solved the problem of electricity by using small-size wind-driven generators, and are developing animal husbandry while reducing the proportion of grain fodder by using grain straw richly available at workteams. They plant mulberry trees on the hillocks to produce cocoons and cultivate perilla and bean between fruit trees to increase the yield. They take great pride in sprucing up their home village by themselves.

The Chonnaeri Cement Factory is one of the units in the van of the endeavour to implement the target of the five-year strategy for national economic development through the drive for increased production. The factory further adjusted and improved its energy-saving production process with its own effort and technology, thus raising the capacity of cement production two times. And it has made another leap forward in putting cement production on a scientific and IT basis; it developed and introduced a new kind of refractory brick for limekiln; established a system for wireless control and monitoring of calcination process; introduced a device for measuring the oxygen concentration of exhaust gas; and applied a device for real-time measuring of the temperature of the section where clinker forms in the limekiln.

"When we invariably adhere to the work to create two or three things from one while taking science and technology as a treasured sword, we can discharge our duty in the building of an economic power. Giving priority to science and technology indicates the shortcut to revitalization of production"—this is the unanimous feeling of the workers of the factory.

Not a few successes were made in other units.

The Namap Cooperative Farm in Yomju County developed and actively introduced a Korean-style organic farming method, and the Samchon Catfish Farm increased the production of catfish to 200 kg per m² on average or 270 kg at maximum, by ensuring a technical guarantee for increasing the weight of fish while reducing the production cost. And the Mangyongdae Chicken Farm, with its scientific stockbreeding strategy, is making considerable successes in production and business activities, and the Songchongang Electric Appliance Factory is consecutively developing different motors of great economic significance, regarding the capability of developing new products as a motive force for its development.

Meanwhile, the Kwangmyong Pit in the Unpha Mine is well known as the one devoid of the heaps of mucks, and Taehung County, the highest area under the sky, is benefiting from the electricity its hydropower stations generate using mountain ►

New Grand March

IN KOREA TODAY THERE IS UNDER WAY the Mallima speed movement that propels the building of a socialist power under the leadership of Supreme Leader Kim Jong Un.

Are You a Mallima Rider?

One day in January Juche 105 (2016) the Supreme Leader visited the Pyongyang Kim Jong Suk Textile Mill. He saw a variety of school bags the factory had made with the canvas of its make, and said with great satisfaction that they were flawlessly made to suit the users of different ages and physiques.

Looking round a new canvas production process, he said that the production line enables the mill to produce canvas using domestically produced tetoron rayon, and the flexible shaft looms and high-temperature and high-pressure roller dyeing machine made with their own effort and technology, and spoke highly of the mill's researchers and workers for their remarkable success in putting the production process on a domestic basis.

After looking round the rayon workshop, the weaving division, the dyeing division and other places, he specified important tasks to be tackled in operating the mill, especially to increase the production of quality cloth and fabric of different sorts including the cloth for school uniform and to keep striving to improve supply services for the employees.

He said: Now our Party members and working people should follow the fighting spirit of the former generation who performed miracles and feats while answering the question of *Are you a Chollima rider?* and live and struggle in such a way as to answer the question of *Are you a Mallima rider?*

Birthplace of Mallima Speed

On January 25, 2017 the Supreme Leader inspected the construction site of Ryomyong Street.

Looking with a bright smile at the buildings that had mushroomed, he said with great satisfaction that Ryomyong Street had made a magnificent appearance distinctly in less than a year, and that a legendary speed of construction was being created by the builders of the street who were making a great leap forward to translate the Party's grand construction plan into reality through their ardent devotion and unyielding struggle.

In fact, it was the Supreme Leader who initiated the project. He had examined a thousand and several hundred mock-ups relating to the project. And he gave detailed instructions about the construction.

The builders newly built 44 blocks of skyscraping, high-rise, and multistorey apartments for more than 4 800 families and over 40 blocks of public establishments including nursery and kindergarten in a wide area of over 90 hectares, and renovated over 70 blocks of apartment houses and public facilities in a matter of nine months. They finished the framework of a 70-storey apartment in 74 days, and the tiling of its exterior in 13 days, thus creating a legend of construction in the Mallima era one after another.

On April 13, 2017 Kim Jong Un participated in the inauguration ceremony of the street built as a model and standard of modern architectural street and a fairyland in the era of the Workers' Party.

Thanks to the heroic struggle of the builders the street has been known as the birthplace of the Mallima speed. □

experience of those units is widely introduced across the country, and a nationwide campaign to overtake or learn from them is in full swing. The enthusiasm of the working people of Korea who are unanimously endeavouring to build a prosperous country while helping and leading one another is growing stronger day after day.

Yom Song Hui

We Are Mallima Riders

IN THE MALLIMA ERA
unfolded by the
Workers' Party
Let's run forward like the
wind towards a new victory.
We are Mallima riders who
surmount all difficulties
believing in our strength.

This is the verse of the song *We Are Mallima Riders* which was produced in Juche 105 (2016) when a new upsurge was brought about in the building of a socialist power. In January that year Supreme Leader Kim Jong Un visited the Pyongyang Kim Jong Suk Textile Mill, and said: Now our Party members and working people should follow the fighting spirit of the former generation who performed miracles and feats while answering the question of *Are you a Chollima rider?* and live and struggle in such a way as to answer the question of *Are you a Mallima Rider?*

In the summer of 2016 a gale and heavy rain, unprecedented in the meteorological observation history of Korea after its liberation from the Japanese imperialists' military occupation on August 15, 1945, hit the Tuman River basin in the northern part of the country, inflicting severe damage on Hoeryong City and five counties.

At that time an all-people general offensive was waged to remove the damage as early as possible. On the debris of the great calamity single-, three- and five-storey apartment houses for over 11 900 families and more than 100 nurseries, kindergartens, schools, hospitals and clinics were newly built and the houses of 15 000 families were reconstructed in a little over two months. Meanwhile, the restoration projects were done including the project to protect the Tuman River bank covering over

1 900 000 km², the improvement of rivers covering scores of kilometres, and the reconstruction of hundreds of kilometres-long railways and roads and dozens of bridges. So many victims, who had lost their houses in the flood, moved to new houses better than the previous ones before winter came.

The Pupho Offshore Culture Station fulfilled its annual marine products plan at 100.1 percent till June 2017. This means it produced dozens of thousands of tons of more fish as compared to the output of the same period in the previous year, and surpassed that of two years ago by 1.8 times.

The zeal of competition to create the Mallima speed prevailed across the country, with a drive to overtake and learn from others and swap experience under way. Thus many units developed into model ones in the era of Mallima.

The Mallima speed is the one at which the building of a socialist power is progressing with miraculous victories effected frequently and successively even in the worst adversity.

*Opening up the short road
to happiness
We perform miracles
with innovations and
increased production.
Let's give full play to
science and technology
To reach an earthly paradise
faster.*

Today the grand Mallima advance in Korea is a campaign of self-reliance and self-development to achieve rapid development by its own strength, technology and resources. The Korean people find the successful way of the campaign in the indomitable mental power and scientific and technological strength.

The manner of work of the

workers of the Osoksan Granite Mine can be cited. In the course of waging a mass technical innovation campaign, the mine introduced many technical innovations, making it possible to carry on stone processing in winter breaking the established concept that the work was impossible in the season. It also established a modern extraction process based on a self-propelled cutter which makes it possible to raise the quality and actual extraction rate and increase the productivity more than 60 times.

The Rangnang Disabled Soldiers' Plastic Goods Factory had its employees enrolled at the study-while-working system to further improve their technical knowledge and skills and train them as masters of invention. The factory applied latest science and technology to old-fashioned machines and used them in production together with new ones. It also waged a drive for increased production, and thus overfulfilled its plan.

Different sectors and many units are producing a lot of Mallima riders who have surpassed the peak year level of maximum production.

It is the fighting mettle of the Korean people to boost production even in difficulties with everything in short supply, and make continuous innovations and advance towards a new victory without resting on their laurels. In the spirit of Mallima, a legendary horse dashing 4 000 km at a gallop, the Korean people are bringing about miracles and innovations consecutively day after day, reducing ten years to one.

The aforementioned song is further encouraging the Korean people in the struggle to make a greater and faster leap forward in the building of a socialist power.

Rim Ok

DIU, Historic Root of WPK

This year marks the 75th founding anniversary of the Workers' Party of Korea (WPK). The founding of the WPK was a historic event for the Korean people to begin to lead an independent life to their heart's content. And the wise leadership of the Party has brought the great history of socialist Korea, and enabled the people to advance along the road of victory full of confidence.

IN THE EARLY 20TH century Korea turned into an exclusive colony of the Japanese imperialists under their military occupation. They had a monopoly of all political power in Korea, enforcing unprecedented colonial repressive policies. They stationed huge occupation forces in the country, and established lots of repressive organs.

Under the colonial rule Korea was reduced to a colonial semi-feudal society, and the life of its broad masses of people, including workers and peasants, became extremely miserable. This resulted in the daily worsening national and class contradictions between the absolute majority of the masses including workers and peasants on one side and the Japanese imperialists, landlords, comprador capitalists and pro-Japanese bureaucrats on the other.

The gloomy socio-economic situation, the serious national and class contradictions, the formation of the anti-Japanese consciousness of workers, peasants and other broad masses of people and their revolutionary aspiration constituted an important condition for a vigorous anti-Japanese national liberation struggle.

The anti-Japanese national liberation movement waged in the form of anti-Japanese patriotic volunteers' movement and patriotic cultural enlightenment movement could not avoid failure owing to its own class limitations.

With the beginning of the 1920s the working class took more active part in the struggle.

The development of mass movements like the labour movement required a strong political leadership force capable of leading it in a coordinated way.

To meet the historic requirement there was founded the Korean Communist Party in April Juche 14 (1925). The party, however, gave up its existence three years after its founding owing to the Japanese imperialists' brutal repression and a factional strife within itself.

The Korean revolution that had experienced difficulties in the early days of the communist movement badly required a militant party capable of leading the revolution to victory through all ordeals.

The requirement was successfully realized with Kim Il Sung beginning to lead the Korean revolution in the darkest period of Japanese imperialist rule.

In order to pioneer a new path of the revolution, Kim Il Sung decided to form the vanguard of the revolution that would wage the anti-Japanese national liberation struggle with a correct fighting programme and by relying on the masses. To this end he formed the Down-with-Imperialism Union (DIU) in 1926.

While reading avidly preceding classics and revolutionary books, he deeply studied the principles of revolution in close connection with the actual conditions of Korea and analysed the historic lessons of the anti-Japanese struggle. In the course of this he became convinced that they had to take the road indi-

cated by the communist ideology if they were to smash the Japanese imperialists and achieve the independence of the country and the freedom and liberty of the people.

Starting the struggle to pioneer a new path of the Korean revolution, he first obtained comrades. While secretly spreading the communist ideology among students, he trained young people, who yearned for new ideas and who he believed would share one idea and purpose and life and death with him, into his revolutionary comrades, and made efforts to rally them in an organization.

On October 17, 1926 he called a meeting for the formation of the DIU. At the meeting he gave a report entitled *Down With Imperialism* in which he announced the formation of the DIU.

The DIU was a pure and fresh political organism of new type that the young people of a new generation created through throes of history for the purpose of realizing the national and class liberation under the ideals of anti-imperialism, independence and sovereignty.

The formation of the DIU became the starting point of the struggle to found a Juche-type revolutionary party, and the organization served as the root of the WPK. The programme of the DIU became the basis of the WPK's programme; the principle of independence put forward by the DIU became that of the WPK in its building and activities. And the communists of the new generation trained by the

Relying on Science and Technology

NOW IN KOREA THE Mallima speed movement is in full swing. The movement reflects the strong spirit of national independence and national self-reliance whereby the country intends to achieve its prosperity and economic development with its own strength and technology.

The country's scientists are very eager to propel the movement with science.

Scientists of the Electricity Research Institute under the State Academy of Sciences went to hydropower stations to get a deep understanding of their existing equipment and, based on it, buckled down to the work to equip them with new facilities in keeping with the developing reality. In the course of this they developed and introduced in the relevant power stations a digital automatic control device, an electrohydraulic digital control device, a comprehensive digital device for protecting generator and transformer, an electric braking device and so on. All of them were greatly conducive to ensuring the stability of electric power production in the sector of hydroelectric power generation.

Meanwhile, researchers of the Mining Engineering Research Institute under the Acad-

emy of Coal Engineering developed a pneumatic rotary boring machine, a continuous wet grouting machine, and a mortar grouting machine for building bolt supports, and sent them to coal mines. And coal miners applied an efficient coal-mining method to realize the comprehensive mechanization of underground work and the diversification of conveyance, thus laying the foundation for increase in coal production.

Those successes became the motive force for the Mallima speed movement to make a greater upsurge and advance faster in all sectors and units of the national economy. This brought about a great improvement in production at industrial establishments, and pushed projects in the field of the grand construction on schedule.

The zeal to support the movement with science and technology is also sweeping through colleges and institutes under them, and factories, enterprises and complexes across the country.

Teachers and researchers of Kim Il Sung University went to the Pukchang Thermal Power Complex and established a desalted water production process and a hydrogen production

process, thus laying a scientific and technical foundation for increasing its power generation. They also made a positive contribution to the normal operation of oxygen-blast furnaces and the Juche-oriented iron production by establishing a slag property measuring system at the Hwanghae Iron and Steel Complex. Last year they produced hundreds of valuable research successes.

Teachers and researchers of Kim Chaek University of Technology played a key role in constructing a modern copper annealing furnace, and establishing an anthracite gasification-based fire-brick production process at a fireproof materials factory, rendering a great service to their completion at one stroke.

The Sunchon Chemical Complex is solving sci-tech problems arising in establishing C1 chemical industry with its own raw materials and technology. First of all, the research team of the complex intensified the research to transform anthracite, which is necessary for gas generation in the process for production of methanol, a starting material of the industry, into suspension. In the course of this, they came to

► DIU became the backbone of the Party.

Later the DIU rapidly strengthened and developed organizationally and ideologically.

Kim Il Sung put in efforts to awaken young people to political consciousness and organize them in order to raise communists of the new generation. To this end he formed the Anti-Imperialist Youth League, a secret anti-imperialist and mass youth organization that carried forward the programme of the DIU.

At that time revolutionary

organizations such as those of youth and students were rapidly on the increase, and the revolutionary advance of the people, especially young people, intensified with each passing day. This required that a new vanguard organization be formed to give unified control and guidance to all the organizations and stronger leadership to the people's anti-Japanese struggle.

To this end, Kim Il Sung formed the Young Communist League of Korea (YCLK) on August 28, 1927. The league was a

revolutionary vanguard organization that gave unified guidance to mass-based anti-Japanese organizations assuming the responsibility to pioneer the path of the Korean revolution in the prevailing condition that a new generation was emerging in the communist movement of Korea.

With the formation of the YCLK a new progress was made in the struggle to found a revolutionary party, the one started by the DIU.

Ri Jong Nam

▶ know that it was of importance to raise dispersibility in solution in order to change anthracite into suspension. Now they directed their attention to chemical material coming from the existing production process. They buckled down to the research to make a dispersing agent with that material. At first, they analysed one by one the characteristics of anthracite produced in different regions. Through repeated experiments based on the analysis, they succeeded in enhancing the dispersibility of anthracite with the aforesaid material at last. This greatly encouraged the workers and officials of the complex in the Mallima speed movement, and provided a precious asset in establishing C1 chemical industry.

The Songchongang Electric Appliance Factory made by itself a motor which is of significant importance in realizing the domestic production of tramcar. This is also attributable to the factory's effort to strengthen its own technical force.

An official of the factory says, "Frankly speaking, making a new type of motor by ourselves was too much for us. So we once intended to rely on other units for talents we lacked, or waited for good talents to be appointed to our factory. But we could not strengthen our own talent force that way."

Then the factory started to strengthen its own talent force. In close contact with teachers and researchers of a national-level college, it chose a dozen persons to learn in practice, and technical knowledge and skills. And the officials of the factory assigned one research task relating to development of new products to each of its technicians and skilled workers so that they could improve their practical ability and technical knowledge and skills stage by stage in the course of carrying out their tasks. This made it possible to fully guarantee the quality of newly developed products.

The maintenance shop of the

Jenam Coal Mine made 5- and 10-ton electric cars with its own strength and technology, and designed and manufactured in a short span of time a hoist more convenient to convey and install than the existing one, thus making a great contribution to the increase of coal output. The hoist they made was highly appreciated at the 34th National Sci-Tech Festival held in April last year.

Last year over 40 exhibitions and presentations took place in the country, including the national sci-tech presentation and exhibition in the sector of materials, national presentation of sci-tech successes in the sector of agriculture, and national exhibition of university students' achievements in information science and technology.

This shows the Korean people's firm will to make a great advance in socialist construction by supporting the Mallima speed movement with science and technology.

Sim Chol Yong

The national exhibition of university students' achievements in information science and technology held in September 2019.



Treasure from Waste

THE KANGSON VINYL Sheet Factory in Chollima District, Nampho, is not so large, but it produces different products by recycling waste vinyl and waste plastics which were thrown away uselessly during the people's daily life. In the products exhibition room of the factory there are over 90 varieties of products of 9 kinds including vinyl sheet of different colours and for different purposes, raincoat, plastic tubes of various sizes and vinyl hose. When people look around the room, they are amazed to know that all of the products are made of waste vinyl and waste plastics.

It was in 2009 that the factory began to pay attention to the waste vinyl. At that time it was pushing ahead with its modernization in keeping with the requirement of the new century.

One day, when U Jae Myong, manager of the factory, was working with workers on the shop floor, he heard by chance what they were talking about. "It will make a mountain if we pile up the vinyl goods our factory has produced since its inauguration in 1995," said one of them.

Their words made the manager feel pride of his work, but there was something that urged him to think again and again. *Whatever will become of those vinyl products when they become useless? If we recycle the waste vinyl...* he thought.

If the waste ubiquitous everywhere were recycled and used in production as raw materials, it would be like killing two birds with one stone as the sources were unlimited and it would help reduce environmental pollution.

Now the factory started the



At the products exhibition room.

work to establish a process for recycling the waste vinyl. It collected the waste vinyl and buckled down to the work to manufacture its processing equipment. The management officers of the factory went to those units in Ryonggang County and other places, who they were told had waste plastic processing equipment, but to no avail.

One day they were told that Songnim City, North Hwanghae Province, had a waste plastics processing equipment it made by itself. So they went there and brought the equipment to their factory. The equipment was not the one for processing raw materials for producing vinyl sheet but the one for processing raw materials for producing plastic tubes and containers. Through repeated failures, the factory finally succeeded in renovating the machine in eight months.

Now the workers of the factory began to establish a process for washing waste plastics. To this end the factory organized a prize contest among the employ-

ees to encourage their creative activity. In the course of this, a new cutter capable of cutting waste plastics lengthwise and crosswise simultaneously was invented followed by other novel technical inventions such as a water-cycling washer and a kind of conveyor.

The workers set to and manufactured a new combined waste plastics washer by themselves. The factory also made 13 machines of 5 kinds, repaired 9 imported machines with the accessories they made, and developed an anthracite gas-based generator. In this course many officials and workers of the factory were awarded certificates of invention, certificates of the national sci-tech festival, and certificates of new creative idea.

U says, "Of course, it was not an easy job to make treasure from waste, but it was a worthwhile job. We came to understand that we can do whatever we are determined to do."

Pak Yong Il

Leading the Workers



Jo Song Gu
(left).

GENERAL MANAGER JO Song Gu of the Wonsan Power Station Construction Company in Kangwon Province is known as an able person. It is his steadfast principle to solve everything with the company's own strength and by relying on science and technology. *An official should overcome difficulties and create something from*

scratch—this is what he always emphasizes to the administrative staff of the company.

His company is responsible for the difficult job of constructing power stations in the province, so Jo is faced with many bottlenecks. He, however, never expected help from the superior. When the company was short of lorries, he repaired a lorry,

which was no better than a lump of iron, to be as good as a new one to run at a construction site.

And when there was no bedrock-breaking device, he made a mobile stone saw. Once the excavation for the foundation of the generator room of Kosong Army-People Power Station No. 1 was delayed owing to insufficient supply of necessary materials. The workers were struggling with a natural rock with hammers and gads. *Isn't there any tool to break the bedrock?*—this was what he always thought of. Then he thought of a stone cutter used in professional stone processing factories. He designed a stone saw himself and started to make it. Several days later he succeeded in making the stone saw. It made it possible to save many materials and much labour and ensure speed in bedrock excavation.

Seeing the general manager invent anything easily, a worker asked him about the secret, and

▶ Jo said, “What is important is to believe in your own strength. You should have self-confidence that you can make anything with your hands if there are air and water.”

Actually, he has no brilliant academic career. But he keenly felt in reality that he should have the ability to be responsible for the management of a unit and to inspire the workers to the implementation of the Party's policy. The apparatuses and implements of value in the company such as the wall and ceiling grinder and a machine for chamfering artificial stone prove how much importance he attaches to science and technology.

Jo always keeps between the first leaves of his notebook a certificate of science and technology he was awarded for the first time after he was appointed as the general manager of the company. Now the certificate is fuzzy, but he steadily disciplines himself while seeing it. One day, when he was reading a book avidly at home, his wife told him to take care of himself, asking him for what he studied so hard at his advanced age. The husband



In an optimistic way of life.

replied that if he was backward in ability, his company, too, would lag behind others.

He is well-informed about the variety and quantity of materials needed for any project, technical innovation tasks, and the organization of building work and the relevant construction method, so he easily points out even a single wrong number in plans worked out by the technical staff. He has led his company to develop by itself

from A to Z, without asking for help from the superior since he began to be responsible for the unit, which anybody else would find difficult to do. In the course of this his company played a pivotal role in the construction of power stations and major projects.

He was given the honour of paragon of the Mallima era.

Article by Sim Yong Jin
Photos by Ri Song Ik

Jo encourages his workers to make innovations



Secret of Growth in Production

THE HUICHON SILK MILL is situated in Huichon, Jagang Province.

The factory produced a lot of silk thread, making a great contribution to the economic growth and improvement of the people's living standards in the province.

Recently it has changed for the better by speeding up its modernization. Last year it exceeded the peak year level of production like in 2018.

Factory with Lots of University Graduates

The factory is characterized by enthusiasm for study.

It was several years ago that Pak Chol Hun was appointed as general manager of the factory. At that time its technical force numbered only more than 10 including some technical officials. Most of its workers regarded sci-

ence and technology as none of their concern.

Pak decided to start his work with doing away with the old way of confining the responsibility for the factory's business activities and the development and introduction of new technology to some technicians alone. Thus its e-reading room, book reading room and sci-tech learning space were closely connected to the shop floor.

And the factory highly appreciated a worker who had made a profitable invention and technical innovation while publicizing his endeavour. In this process the workers' zeal for learning science and technology grew stronger, and thus a lot of inventions were introduced in production. The technical innovations introduced last year numbered 84 including the making and installation of a new

device in the aging machine, and the making of an automatic thread packing machine. Not long ago a new automatic device was made and introduced to the aging machine, increasing productivity four times.

The quality of silk thread was improved from previous level A to 4A.

As the zeal of the producer masses to learn science and technology was growing stronger, the number of university students remarkably increased among them. Over one hundred of the four hundred workers have graduated from university, and 180 are learning in the on-line course of Pyongyang Han Tok Su University of Light Industry.

The general manager says, "Our goal is to make all the workers of the factory university graduates in the near future."

► Our Life Is the Best

The factory is also characterized by its mass sports activities and varied cultural life. It happened 10 years ago. At that time the factory was in a poor condition. Poor supply service and production made all the workers lose heart. Then the factory organized volleyball, basketball, table tennis and other sports games. Its officials called upon the workers to build up their physical strength, work optimistically and break through ordeals.

Such sports activities took place not only during the spare time but also on Sundays and public holidays. And the factory awarded considerable prizes so as to heighten the workers' will to work.

Later the factory consolidated its material foundation by building a barn, a greenhouse and a mushroom cultivation house with its own effort.

Meanwhile, the factory organized a varied cultural life. In the evening after work there took



place a recreation party, and every Saturday young women's cooking show was held in the workers' dormitory. Thus the atmosphere of the factory changed for the better. The compound of the factory more frequently reverberates with the cheers and delightful singing.

The workers' growing pride in their work leads to innovations in production.

Today the factory has in-

creased the silk thread production more than forty times compared with what it was at its inauguration, and its products of high quality are in great demand abroad as well.

As a result, the life of the workers grows rich as the days go by, and their zeal for work is growing stronger and stronger.

*Article by Kim Son Myong
Photos by Hwang Jong Hyok*

Technical innovations are done to increase production.





By Its Own Strength

THE ONCHON GRANITE Mine in Onchon County, Nampho, was developed on October 15, 1952, when the Fatherland Liberation War (June 25, 1950–July 27, 1953) was at its height, in order to produce granite goods needed for the postwar rehabilitation. After the war the granite products from the mine made a great contribution to hastening the rehabilitation projects such as the reconstruction of Kim Il Sung University, the revetment of the Taedong River bank, and the construction of the Friendship Tower. Pak Yong Nam, general manager of the mine, says, “At first my mine made the products by manual methods. Today we produce various kinds of granite products with modern equipment.”

The first production process of the mine starts with rock drilling. The full operation of compressors was needed for the maximum operation of rock drills. But insufficient supply of spare parts of the drills caused difficulties in production. Those

parts were all imported ones.

Now the management of the mine determined to solve the problem with its own effort. They discussed the matter with their scientists and technicians, and the latter agreed. Some officials, however, shook their heads doubting whether they could make an oil separator, because the technology of its manufacture had not been known so far, so it was a hard job to develop it by themselves. But the problem should be solved without fail in order to put the production on a normal basis.

The scientists and technicians of the mine thought that the only way out was to make the oil separator by relying on their own technology, strength and resources, and buckled down to the research at once. They collected basic data and set up stage-by-stage plans to solve the relevant scientific and technical problems. And the researchers of the State Academy of Sciences, who were at the mine at that time, actively

helped them, and the workers of the mine joined the endeavour. At last they newly developed their own oil separator, not inferior to the imported, at a remarkably low cost.

It sparked off a technical innovation campaign among the workers. Jang Won Nam, head of the production and technology department, updated the control program of the compressor to suit the field condition, and worker Kim Myong Jae newly developed an alloy bearing bush used for the contraction of the compressor. Other workers, too, made a lot of valuable inventions conducive to the normalization of production.

The mine also succeeded in producing decorative blocks of high quality with stone powder from granite processing.

Now the mine keeps normal production thanks to the growing creative power of the producer masses.

*Article by Pak Thae Ho
Photos by An Yong Chol*

At the quarry.





Profitable Greenhouse

THE WONSAN UNIVERSITY of Agriculture is situated in a thick forest, and the soil-based pollution-free greenhouse (intelligent greenhouse) is in the centre of the campus.

We visited the greenhouse the day before the “heavy snow-

fall” that fell on the 7th of December last year. The weather was very cold as if we were in the midwinter days on the coast of the East Sea of Korea.

In front of the greenhouse we met Dr Ri Yong Su, a candidate academician and professor

and a researcher of the Vegetable Science Department of the university’s Horticulture Faculty. Guided by him we entered the greenhouse whose interior



► temperature was considerably warm. Different kinds of fresh vegetables were growing in it, and cucumbers, tomatoes and other fruit vegetables were hanging in clusters.

Ri said that the temperature of the greenhouse was automatically controlled, and led us to the automatic control device. It was not so large, but when it stored different data including the location, latitude and longitude of the greenhouse, time difference with the Greenwich Astronomical Observatory, light, air temperature and humidity of soil, it controlled the interior temperature automatically. Vegetables were grown divided into sections, and the irrigation was done automatically to suit the specific features of each species. In the evening a large-size vinyl sheet covered the greenhouse automatically, keeping it warm.

The researcher said that they had newly cultivated scores of species of vegetables and grain crops and established the relevant cultivation techniques for a decade in the greenhouse. He added, “The greenhouse is equipped with a scientific seed-production system, so there is a crop which can be cultivated three times a year. And here are high-yielding industrial crops widely known in the world. We acclimatize them to the climatic and soil conditions of the country and grow them on trial to send them to many research institutes

and cooperative farms.”

Recently they have done the experimental breeding of date tomato several times in the greenhouse, thus obtaining a new species of date tomato that is highly productive and contains much sugar. It also cultivated a simple species of big tomato pretty in shape and colour from the Wonsan big tomato using a method of separative cultivation. It also cultivated a new species of watermelon with high selenium content from big-seed watermelon. And it bred a new species of fertilization-free cucumber which can yield 70-90 tons per hectare in ordinary greenhouses.

Ri said that the greenhouse

produced different species of the Aeguk grass, Pacific azolla and so on, and that some of the species were awarded state certificates of registered sci-tech achievement, certificates of introduction, certificates of invention and certificates of contrivance. He continued to say that with the greenhouse the university could finish the scientific and technological researches in a short span of time, which would have taken three decades otherwise.

Seeing the good species of seed-production plants, we envisioned future bumper harvests from all greenhouses across the country.

*Article by Sim Chol Yong
Photos by Ri Chung Guk*

Researchers are engrossed in the cultivation of new crops.



For Improvement of Cognitive Faculty

IN APRIL LAST THE 34TH National Sci-tech Festival was held in Pyongyang amid the concern of scientists, technicians and many other people. In the festival a drone presented by the Electronic Automation Faculty of Kim Il Sung University drew the special attention of people.

Doctor and Associate Professor Yun Jong Nam, a department head of the faculty, said, "We developed a drone which can give the students a vivid idea and visual image of control theory and control engineering in educational practice. Drones are widely used in education and many other fields."

Then he told me the following story.

One day a few years ago Yun was faced with a knotty problem while giving a lecture on the automatic control sector. He explained to the students about the posture estimation related to how to find out the inclining angle of bodies in the air, but it was hard for them to understand it. They had to know it to have a correct understanding of posture control. So he took much trouble to have them understand it.

Now he thought that if he made an experimental apparatus and used it to explain its theory to the students rather than relying on different multimedia and visual aids, it would improve their cognitive ability.

He made up his mind to make a drone, which is an integral whole of automatic control. The other teachers of his department supported him actively, helping him with the relevant research. Actually, his drone research had begun long ago. Because when Yun studied at the then Automation Faculty of Kim Il Sung University, he wrote a graduation thesis relating to drone control.

Afterwards, he continued to work on it while working as a teacher of the university. In the course of this he made public many papers in scientific magazines at home and abroad. In 2013 he published the paper *Robust Disturbance Observer for Two-inertial System* in the IEEE Transactions on Industrial Electronics, drawing the attention of many people.

So the theoretical preparations had been done. Based on it, the department buckled down

to completing the main design and started the drone making. Yun took charge of designing and making a central processing unit, and creating and inputting control algorithm. Researcher Paek Su Yong smoothly solved the sci-tech problems arising in programming the control algorithm.

The drone was completed in a few months, and they conducted the first trial operation. The drone, which flew well indoors, nosedived on the ground outdoors as it failed to maintain its balance. Through repeated experiments they found out errors in controlling the drone, and accelerated the research to solve them. While studying the program to have the drone maintain its stable posture in the rapidly-changing open-air conditions the researchers developed the robust control technology.

The teachers of the department contrived a posture control balance beam to fix the drone on it to test its performance, thus making it possible to save materials, time and effort a lot while intensifying the research. Shortly afterwards the drone they developed became able to fly in the sky in any circumstance and conditions. They also developed other experimental apparatuses for education one after another such as a reversible pendulum control testing device.

Kim Yong Il, head of the faculty, said, "We educators should consider the future of the country. In keeping with the ever-developing science and technology we will massively introduce in education research findings capable of further improving cognitive faculty and promoting economic construction in the future so as to prepare the students into sci-tech talents."

Pak Un Yong



Teacher's Desire

LAST APRIL A MEETING TOOK PLACE TO congratulate honour students of Anak Primary School in Anak County. A schoolboy was the first to make a speech, and he had done so for three years. He talked how he, who had been crippled for congenital infantile paralysis, got on the platform. He was all a smile and tear.

When people celebrated him, he said, "I owe my honour to my teacher." His teacher was Jong Hae Suk, and the schoolboy was Ki Nam Ryong.

Hae Suk got acquainted with Nam Ryong three years ago—several days before the school year began. When she was making a list of would-be primary school children she saw Nam Ryong wandering about the school on his mother's back.

From his mother she knew that Nam Ryong was there at the school because he wanted to see the school gate at least although he decided he could not go to school as he was crippled. Looking into the clear apples of his eyes, the teacher felt the sense of her duty.

That evening, Hae Suk visited Nam Ryong's home. To her surprise the boy's grandparents and even his parents disagreed with her about Nam Ryong's going to primary school because they thought he would be a burden to his class even though he went to school, as he could not keep the balance of his body. But Hae Suk would not give up. She decided she had to pave the way for the boy's learning.

She knew she would become his limbs.

Day after day she headed for Nam Ryong's home. Thus Nam Ryong entered the school on his teacher's back on the school opening day.

All teachers, parents of students and schoolchildren congratulated the boy. Since then Nam Ryong's voice of reading ABC reverberated clearly in the classroom.

Hae Suk made redoubled efforts for him because she knew the boy had not received preschool education. She spent all day for Nam Ryong—during lessons, on the way to and from school with the boy on her back, and even after school. She kindly taught Nam Ryong how to hold a pencil and elementary spoken and written Korean language and basic calculation method. The teacher guided the boy to improve his ability to make an analysis and application and to present his ideas. Her steady efforts were a great encouragement to Nam Ryong,



and after four months he could overtake and outstrip others in all subjects.

Hae Suk poured kinship care on the boy's treatment and physical development.

At that time, the most painful time for Nam Ryong was the physical education lesson. The reason was that he was alone in the empty classroom because he could not move an inch though he was in the playing age. The one who understood his anxiety was just his class teacher, Jong Hae Suk. When she heard exercise was good for his cure, she led him to do walking exercise, holding him in her hands.

Some time ago she brought the boy to the Okryu Children's Hospital in Pyongyang.

And she visited different places for consultation about his problem—the local county people's hospital, the provincial people's hospital, several famous hospitals and medicinal herb gardens in deep mountains.

Finally, thanks to Hae Suk's sincere care, Ki Nam Ryong, once a deformed boy, could walk and take part in the physical education lesson which he had longed for so much.

Three years have passed. In those days he had grown up to be a fourth-year student, an honour and model student his school is proud of.

Hae Suk said when Nam Ryong went on to his fourth year at the school, "You could hardly think of your development without the beneficial socialist educational system. I hope you will continue to keep honour of top student by working harder. This is my earnest wish for you."

Kim Son Myong

Future Heroes Grow



In front of the bust of Hero Ri Pok Jae.

RI POK JAE TECHNICAL Senior Middle School is situated in Sopho-dong No. 3, Hyongjesan District in suburban Pyongyang.

Originally its name was Sopho Senior Middle School. According to the February 2, 1995 decree of the Presidium of the Supreme People's Assembly, the name was changed into the present one after Hero Ri Pok Jae, and soon his bust was erected in front of the school building.

After graduating from the school Ri served as a train

security man. One November day in 1994, in the face of an emergency while on duty, he sacrificed himself to rescue lots of passengers.

Looking back upon the days when Ri was attending the school, teacher Sim Song Hui says, "Hero Ri Pok Jae was good at both studies and organizational life. He had an unusual love for his mates and school. One day, during a sports lesson, one of his classmates suddenly collapsed due to a stomachache. Ri immediately took the boy on his back and rushed to the hos-

pital. But for Ri, the boy's life would have been in danger.

"During his school days and before leaving school, he planted good species of trees a lot around the school. The trees are now



▶ growing well."

Whenever the students of the school enter the schoolyard, they stand in front of the bust of the hero and confirm their determination to live creditably for the country and people as the hero did.

The school always sees that its new students put bundles of flowers before the bust of the hero and are told about his feat. This serves as an important opportunity for the students to take pride in learning at the alma mater of the hero.

Every national holiday the students visit the hero's home to see his wife Ri Son Ok, who always says, "You cannot perform a heroic feat merely on impulse. It comes only when you love even a tree and a blade of grass of the country and your friends from childhood."

Meanwhile, the school makes it a rule for its students to have a memorial ceremony in front of the hero's bust on the founding anniversary of the Korean People's Army (February 8), the anniversary of the victory in the



Proud of their hero.

Fatherland Liberation War (July 27) and the anniversary of the hero's death (November 19). And it often organizes a meeting for reading compositions and an oratorical contest under the title of *Hero and I*.

Through these meetings the students understand that patriotism is not an abstract concept but it springs from the love for one's family, friends and school, says Pang Il Hwa, headmaster of the school.

The school also makes it a rule for its students to plant

trees round its compound on the Tree Planting Day (March 2) and the graduation day.

That's not all. It is well known as the best in academic ability across the district.

Its teachers are of the opinion that the students should study hard first of all in order to follow the spirit of the hero.

As a result, the rate of its graduates' admission to schools of higher grade is very high.

Article by Sim Hyon Jin
Photos by Ri Chung Ryol

Students improve their ability.





At Sori Primary School

“MY SCHOOL WAS BUILT A DOZEN years ago, so it is rather unknown than known across the country.” This is what the headmaster of Sori Primary School in Sariwon, North Hwanghae Province, said after welcoming us. Invited to tell us about her school, she modestly declined, saying they had nothing special to speak of. Still, we wanted to look round the school.

We went to the teaching garden first as its red signboard had caught our eyes when we entered the school compound. In the garden we met teacher An Jong Ae who was tending a tree. The teacher told us a story.

It was not easy to create the teaching garden. In order to obtain all the plants the pupils should learn about as required by the curriculum, teachers of the school took the trouble to climb mountains to transplant relevant trees, and carefully selected high-yielding vegetables and fruit trees and planted them with great sincerity. Thanks to the teachers’ strenuous efforts the garden turned into a “treasure grove” where hundreds of sorts of plants were growing.

When we entered the building of the school together with An, chirping of different sorts of birds came from somewhere to our amazement. Saying it came from a nature room on the ground floor, An guided us to the room arranged for the sky, land and sea to be observed.

An said, “We concentrated our efforts on making the model of the sea vivid. As inland area, our province has no sea, so our pupils lack an idea of the sea. And we made efforts to give them a visual panorama of not only sea creatures described in the textbook but also the ecological system of the sea so that they could have a vivid idea of the sea.”

The teachers, she added, went to the sea to collect shells of shellfish, abalones and so on in

▶ order to make it possible for the pupils to have an idea of the bottom of the sea and its creatures at a look.

Also vivid was the model of the woods with life-like models of a raccoon dog coming out of its cave, a cat staring at a prey, a goshawk perching on a pine tree, a moss-covered oak tree, a brook meandering round a rock, etc. and it reverberated with chirping of all sorts of birds. We felt as if we were in a forest.

In the room there were fourth graders practising observation of nature to know what animals live in mountains. They gladly clapped shouting there were pheasants and badgers from Mt Jongbang, the pride of their home town.

The ceiling of the room was dedicated to the depiction of planets and the galactic system. Spectacular was the position of the Great Bear changing along its orbit.

An said practice in the room was most eagerly looked forward to by the pupils. Last year there was a provincial demonstration class in the room.

Besides, we looked round multifunctional classrooms. And the walls of corridors were covered with various visual aids introducing what the pupils should surely know about.

Unlike what the headmaster said I found the school’s educational conditions and environment well arranged on a high level.

The pupils from the school, I was told, had always won municipal and provincial academic school contests.

What we realized through our visit to the school is that quality of education does not depend on the history of a school but on the efforts of teachers.

*Article by Rim Sang Jun
Photos by Ra Phyoung Ryol*



Appraisal of medicines.



NOT LONG AGO WE visited the Ryonghung Pharmaceutical Factory located in a picturesque place of Kwangbok Street in Pyongyang. The factory's buildings were cosy and clean, and good species of trees were growing in its compound. General Manager Sin Kum Rye, 50, welcomed me gladly.

Sin said that her factory, through 20-odd-year-long development, has changed into a technology-intensive type that produces efficacious medicines of the highest quality with production processes of the GMP level stipulated by WHO, and led me to the shop floor.

Guided by her we looked round several production processes including those for production of Koryo medicines and modern medicines. Different kinds of medicines were being produced in a germ-free and dust-free environment, using automatic and flowline equipment. After looking round the medicine-packing

process, the sci-tech learning space and other places I dropped in at the product show room full of popular medicines, household medicines and other kinds of medicines.

When I said there were approximately over 150 kinds, the general manager said that there were more than 190. She added that 60 of the kinds were newly produced last year to my surprise. With curiosity I asked her how they could produce them in a year. She told me she could not forget the days when they produced them, and said, "It is our duty to develop and produce more kinds of medicines badly needed by the people and practically conducive to the promotion of their health. We only tried to fulfill our duty."

When we looked around the products, Jo Un A, a technical preparation instructor, kindly explained about the Koryo Insam activated pill. According to her the pill has unusual efficacy in

treating diseases by activating the immune system of the human body. Especially, the Koryo Insam, the main ingredient of the pill, has strong pharmacological actions such as immunity restoration, anticancer and antibacterial effect, strengthening of invigoration and retarding of ageing, so it is called "king" of Koryo medicines.

She continued to say that many medicines including the aforesaid pill, *Angunghwanghwan* and *Cnidium officinale* thrombus injection were highly rated at home, and at international trade fairs and exhibitions held in China, Mongolia and Vietnam.

Seeing us off, the general manager said, "It is a growing desire of the people to live a long life free from diseases. To meet their desire we will develop more efficacious medicines in the future, too."

Article by Kim Tae Song
Photos by Ra Jin Hyok

Note of Visit to Ryonghung Pharmaceutical Factory

A medicine production line.



Pioneer of New Subject



Kim Sung Guk (centre).

KIM SUNG GUK, HEAD OF THE Obstetrical and gynaecological department of Pyongyang University of Medicine, is unusually busy.

Almost every day Kim shuttles from his university to Pyongyang Maternity Hospital to give lectures and treat patients, and conduct research without knowing the passage of time. He does twice or thrice as much work as others do for the development of obstetrics and gynaecology, and he is proud of the way he lives.

It was 29 years ago that Kim began to work as teacher of obstetrics and gynaecology. His work, however, covered not only lectures but also treatment of patients. He knew only the lectures based on a teacher's rich clinical experience as well as his or her wide knowledge could be vivid and profound enough to arouse the interest of students.

In the course of treating patients, he grasped a point. It was related to habitual abortion. At that time relevant research was under way in different aspects, but there was not still a proper remedy. Hormonotherapy was in general use. The treatment, however, failed to ensure a high rate of pregnancy maintenance, and furthermore, had negative effect on the health of women. He was very sorry whenever he heard the earnest complaint of those who were sad about their failure to have children. There were not a few such women, so he decided it was a problem that had to be solved without fail in the field of medical science.

He thus tried to find a new solution. His goal was to find a highly efficacious and safe method of treatment that would have no negative effect on the health of women and fetuses.

In the course of repeated research he reached

the conclusion that in the field of obstetrics and gynaecology the physiological course of women, the cause and pathogenesis of their diseases, and relevant prevention, diagnosis and treatment are related to immunology.

Pregnancy immunology, the combination of obstetrics and immunology, was a field still unexplored at that time.

Though faced with failures and lots of difficulties, Kim unyieldingly managed to pioneer the untrodden path step by step. In the course of this he completed a method of treating habitual abortion in the early stages of pregnancy by means of isoimmunization, thus developing the field of pregnancy immunology. This earned him a doctorate.

Soon afterwards, he developed a new method of diagnosing cervical cancer in its early stage. The method was simple and could be widely used, thus winning popularity with doctors and patients.

It is already 20 years since Kim began to work as department head. Over the years he has written scores of textbooks and reference books, including *Obstetrics and Gynaecology* and *Clinical Treatment of Women's Diseases*, and hundreds of essays, and made experimental apparatuses and obstetrical and gynaecological models.

He won the special prize at the national sci-tech achievements exhibition of the public health sector held last year and was rated as excellent at sci-tech festivals and exhibitions, and he has received lots of certificates of registered sci-tech achievement, introduced science and technology, invention and ingenuity.

Many of his books are those obstetricians must read, and he has become an authority in his realm.

He has a lot of disciples, including those with a doctorate, who are promoting the development of obstetrics and gynaecology together with him.

Though over 60, Kim is still enthusiastic. Not long ago he completed an image transmitting system linking operating theatres to practice shops, and modernized the teaching contents of the obstetrical and gynaecological subjects.

Kim says, "I have more things to do than what I have done. To develop obstetrics and gynaecology is an important job related to the health of women and the future of the country. Our country grants preferential benefits to the promotion of women's health. Whenever I see a plane and a strong medical team mobilized to save even a single pregnant woman in a secluded village, I renew my sense of responsibility for the development of the nation's obstetrics and gynaecology and redouble my efforts."

Rim Ok

Victory after Victory

MINHUNG SENIOR MIDDLE School in Moranbong District, Pyongyang is widely known across the country for its good operation of the basketball circle for over 20 years. Female members of the circle have never failed to take first place in national competitions.

The circle won its 23rd trophy at the 45th Sobaeksu Prize National Schoolchildren's Games held last year. Kwon Su Jin, Kim Kum Jong, Kim Su Jong and other female players from the circle fully displayed their ability in every match by combining well swift dribbling and fast breaks.

When they held up the trophy again congratulated by all the audience, Ko Jong Suk, instructor of the circle, looked back with deep emotions upon what had happened during the formation of the circle 20-odd years before.

It was in 1997 that Ko was appointed a teacher of physical culture at the school after graduation from university.

She started her work with the

determination to form an excellent circle to train promising reserve players. Things, however, did not go smooth as she desired. She selected students, but some of their parents did not allow their children to join the circle. Only when they came to know about the sincerity of the teacher who intended to train better the students, the future pillars of the country, did the parents join her effort.

Ko painstakingly guided the students through training in order to make them interested in basketball as soon as possible. She drew detailed plans one by one in a way suited to the age and psychological qualities of the students. While intensifying her guidance to them in training, she put the main emphasis on mapping out practical training schedules and making use of scientific devices such as measuring instruments.

Thus the ability of the students improved day after day. After winning the 1999 national

schoolchildren's games for the first time, Ko, not content with the success, put the students to intensive drills so that they acquired through steady training varieties of high skills used much in basketball, including fast no-step shot, jump shot, both hands-used pass and deception.

While using the method of match-mode training, she set leading students a higher goal, and the laggards a goal of catching up with the leaders, and saw to it that they carried out their daily tasks without fail.

As a result, the circle produced basketball masters every year.

Ko says, "The successive victory of my team is the fruit of painstaking efforts. I'll provide more scrupulous instruction and training guidance so as to keep our honour."

Basketball players from the circle are now displaying their ability to the full at different sports clubs.

Rim Hye Gyong



Dream of Women Footballers

LAST YEAR THE Naegohyang women's football team defeated all its rivals by making the most of its tactics, and through left and right breakthrough and counteroffensive and close cooperation between forwards and backs at third-class women's football (Group A) event of the Paektusan Prize Games in celebration of the Day of the Shining Star (February 16, Chairman Kim Jong Il's birthday—Tr.), thus winning first place. It also distinguished itself at the 2018-2019 first-class women's football league of the DPRK.

It was organized a few years ago, but it has ranked among the top three at several domestic competitions, thus becoming a strong team, drawing the attention of the experts and amateurs.

Coach Choe Kwang Hyon says, "We analysed and synthesized in detail the experience and lesson we had previously achieved in training and matches, and enhanced the effectiveness of training by introducing scientific training

means and methods."

The team has graduates of the Pyongyang International Football School, and those selected from the football schools across the country. Though they are different in age, character and habit, they move as one on the field under the control of the coach.

When Choe began to take charge of the team, he thought a lot—he worried about cooperation between graduates of the aforesaid international football school and other members of the team. All of them kept an admirable wish to display the honour of the country with football, so they were inclined to do single dribbling rather than passing the ball to their colleagues only to be tackled frequently.

So the coach put primary effort into achieving the unity of the team. What was important was to pool their intention. To this end he had them deeply understand through matches that victory depends on the unity of the team although skills of each player are important.

First of all, he organized

matches with the teams of the juvenile sports schools in different regions, which ended in favour of his team. Later, his team had a match with third-class players of the Naegohyang Women's Football Club, and they lost it by 5-0.

On the matter of the defeat the players of his team had a serious argument; some blamed the backs; and some said that passes were not correct. Then Choe said, "The match gives us a serious lesson. Of course each of you has high skills. But you should understand that those skills are useless without collective help." Then he pointed out demerits of some players. He added, "I know all of you are different in native place and age. But I think we can win when you think of the honour of the team and the country before yours."

Since then the players

helped and led one another, and thus they achieved good results in matches.

Now the coach is making effort to grasp the trend in women's football, find out the proper mode of play and apply it to training.

Centre forward Jon Sun Sim, who is the team's captain, says, "Every footballer aims to win,

and it is not an easy job. We run and run for the purpose."

Half-back Song Chol Sun says, "Our coach says that scientific play is more important than physical preparedness. Though we are young, we are making an effort to carry out the training tasks of high intensity and master various tactical systems and methods."

When the other girls of their age are out in fine clothes, the footballers of the team run in sportswear on the green field towards victory. This makes them grow mentally and physically and their dream grow stronger.

Article by Kim Il Bong
Photos by Yun Song Hwa



At a break.



I'll Remain a Winner

(4)

Kang Ho Jin

A DAY OR TWO PASSED like that. The coach, however, still seemed to be paying no heed to Sun Hui. With a strong determination she pertinaciously asked her colleagues, to whom the coach taught techniques, to act as her training rival. Each of them would avoid her as she approached the drill fiercely regarding it as a real competition. Sun Hui never failed to throw them onto the ground, and that using the techniques the coach had taught them, under his nose. It was quite interesting to her. And this never did harm to her relations with her colleagues.

Sun Hui attentively studied the techniques Pak Chol taught to the others, and soon mastered them. At last the coach gave in to the way she strove to acquire techniques by herself.

Thus, in 15 days, the coach began to teach Sun Hui again. At the same time he made efforts to help the girl turn her unusual self-respect into persevering pluck because to a sportsperson the spirit of fighting unyieldingly and confidently is more important than techniques.

The entire nation was undergoing the unprecedentedly hard time of Arduous March when Sun Hui was learning judo at the juvenile sports school. At the time even maize was in short

supply, so they had to make and have substitute foods. Sun Hui, too, had boiled maize or noodle for lunch. Her family managed to give her at least grain all the year round one way or another. Aware of her grandmother and parents' care the girl strove to train herself without grumbling at her food, and was more engrossed in her drill. Quite often she felt faint with hunger when she finished intense training. Still, hardly a day passed without her training.

Sun Hui mastered techniques unusually fast through her painstaking training, and a year after beginning to learn judo, she made her debut in the women's 40 kg category judo event of the national games of juvenile sports schools, winning her first gold medal. She still values the medal as well as those she later won at the Olympic Games and several rounds of the world championships. Standing on the podium she was more pleased to beat her rivals than to win the gold medal. Most of her rivals had begun to learn judo earlier than her and they had already made some achievements. But she, as a novice, defeated all the opponents successfully, who had assumed an air of importance, thus winning the medal.



It was Sun Hui's goal and habit to always beat and go ahead of others in either training or competition.

From then on she always won the national games of the kind held every year.

It was when she won the women's 48kg-category judo event of the Mangyongdae Prize Games held in Nampho in Juche 85 (1996) that she attracted the attention of judo experts, who were struck with admiration at the way she skilfully used different techniques including arms-based shoulder throw and stomach throw, and never wavered in her position even when attacked, while wonderfully maintaining her balance.

Sun Hui became a DPRK master athlete when she was 15.

Later she developed into an invincible domestic champion by always winning victory in different domestic competitions such as the DPRK championships, the junior championships and the technical innovation games. In the course of this she was transferred to the Moranbong Sports Club, and soon chosen as

▶ a member of the national team.

At first she was involved in the national team without her old coach Pak Chol.

Her new judo coach, who was temporarily in charge of Sun Hui, made her do training against four rivals—who he had trained himself—in turn for the purpose of understanding Sun Hui's physical and technical preparedness.

Sun Hui wore the greatest training burden, and yet she encouraged herself, saying inwardly, "I won't be Kye Sun Hui if I lose even once. Wait and see who will win!"

The four rivals took a rest in turn, but Sun Hui had to fight against them without any breathing spell. She, however, showed no signs of tiredness at all.

Pak Chol had often told Sun Hui about the training of dancers, saying that whatever difficulty they might have, they always smiled while dancing on the stage. And he stressed that athletes, too, should never reveal any signs of tiredness in training or in competition.

So Sun Hui deliberately strove not to reveal any signs of tiredness at all.

A month passed like that, and it was not Sun Hui but her rivals who fell down exhausted.

At last the coach gave in to her perseverance and outstanding physical and technical ability, exclaiming, "You're a lump of iron, not human. Hard steel. I like you."

Thanks to her unusual perseverance and high physical and technical ability, Sun Hui was selected as a member of the na-

tional team to participate in the 26th Olympic Games to be held in Atlanta, the US.

Pak Chol, Sun Hui's old coach, was to go together with her.

"There is no alternative for us, Sun Hui. You should win the gold medal at this Olympics without fail," the coach said, encouraging Sun Hui. (He had been transferred to the national team.)

He's right, Sun Hui thought. *I have no other way but to win victory.*

With the determination Sun Hui started a more intense training course under Pak's guidance.

The coach made sure that Sun Hui adopted the strength-pointed mode of fighting to make the best of the physical merits of the girl who was strong in balance maintenance thanks to her unusually strong legs and in avoiding falling at her opponent's shoulder throw and leg lock. It was an appropriate mode of competition for Sun Hui who was still wanting in technique.

She put great efforts into her technical and physical training. After doing knee bends, shouldering barbells—that weighed over 20 kg—for more than one hour, her throat was parched with thirst, her legs trembling, and she had difficulty in breathing.

Sometimes she felt like throwing away the barbells that weighed on her shoulders. Then, she thought, her body would feel so light as to be able to fly and she would be able to breathe easily.

How about stopping this once, only this time?

It was an irresistible temptation and her inward pitiful cry. Then she would remember a variety of things that had happened in the past. Once she remembered what had happened when she had just begun to learn judo. At that time she was absent from class for over two months as she was preparing to take part in the national games of juvenile sports schools. One day Sun Hui was in class after a long absence, and her class teacher, who taught mathematics, asked her to come to the blackboard and use a newly learned formula to solve a problem.

Sun Hui, who had taught herself in her spare time, could solve the problem with ease.

Then the teacher gave vent to a sigh of a hidden meaning. After class she called the girl to the room of her department.

"You're of intelligence, Sun Hui. Wouldn't you like to stop sports and study? It's really a pity that you should waste your talent," the teacher said with sincerity.

Her words made Sun Hui think a lot. In her childhood, Sun Hui hoped to study at Kim Il Sung University like her father. Then she remembered Pak Chol saying she should become an athlete to display the honour of the country when she had joined the judo circle. At the time she made up her mind to become such an athlete without fail. She knew it would not be easy, but she started her career with a determination not to give it up for anything.

(To be continued)

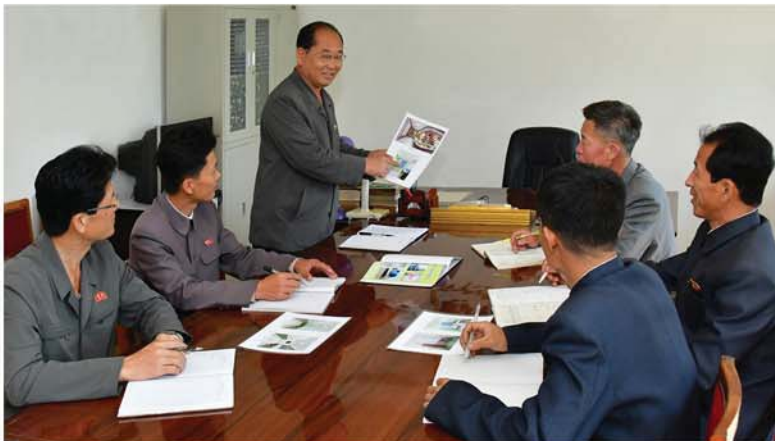


Conscience of Survey Team Members

MANY PEOPLE OF KOREA ARE INCREASING the country's wealth, and the officials and survey team members of the Kangwon Provincial Survey Management Bureau are among them.

In recent years they discovered rich deposits of coal and valuable minerals and the source of a hot spring, secured an inexhaustible deposit of natural finishing materials, successfully carried out the ground-base drilling exploration and the barrage-wall fixation drilling necessary for the construction of the Koam-Tapchon railway, the Wonsan Kalma Coastal Resort and the army-people power stations in the province.

A consultation to apply advanced technology.



One day they were exploring the Kwanphung area of Wonsan City for a spring water source. While exploring the Masikryong Mountains hundreds of metres in height together with some members of the survey team, Jon Chol Gu, director of the bureau, saw one of them break some regulations in drilling. As a man with experience of over ten years as a surveyor, he said that the spot was relatively simple in geological structure. Jon, however, did the drilling again together with him, saying, "We should be responsible for the geotechnological safety of all buildings and structures going up on this land. This means that we should leave no twangs of conscience to feel."

Later spring water supply stations appeared across the city thanks to the unknown efforts of the survey team.

The following story came from the hydrogeologic survey team under the bureau. A railway

bridge was about to be built to link Koam and Tapchon situated in the Wonsan Bay, and the team was tasked with drilling holes for piers of the bridge. It was not an easy job to do so over a long distance in a short span of time, and that in midwinter.

Kim Song Thae, head of the team, and other members pooled their wisdom and invented new drilling methods, and thus they successfully finished their task, making a great contribution to bringing earlier the completion of the Koam-Tapchon railway project. Besides, they conducted the geological survey of sites for over 100 facilities such as hotel, public service amenities, apartment blocks and amusement parks to be built in the Wonsan Kalma Coastal Resort, and found out the underground water and geothermal water, thus helping solve the problems of drinking water and heating. And the Kosong Army-People Power Station and the Hoeyang Army-People Power Station built in the province are inconceivable apart from their effort.

The structures recently built in the province are associated with the sincere efforts of the officials and members of the survey team.

Article by Sim Yong Jin
Photos by Ri Song Ik

A geological survey.



Remains of Altar Unearthed

THE KOREAN PEOPLE HAVE LONG regarded and worshiped Mt Paektu as their ancestral mountain representative of the dignity, mettle and soul of the nation.

A research group consisting of the History Faculty of Kim Il Sung University and the Mt Paektu's Lake Chon general surveying team unearthed in a small basin of Hyangdo Peak on the shores of Lake Chon the remains of an altar which dates back to the period of the feudal Joseon dynasty (1392-1910).

Shaped like a small hill it is almost square with its base being 36 metres long and wide and its surface being 15 metres long and 12 metres wide. And it is 9 metres high.

On the top of the altar is a stone slab 140 cm long and 80 cm wide. On the stone are inscribed 24 letters which say that the first king of the feudal Joseon dynasty performed sacrificial rites there praying to the heaven and earth for power, and that a man discovered the relic in 1927.

A stone 26 cm long and 20 cm wide was also discovered there. On the stone are inscribed in ink 26 letters which say that people performed sacrificial rites there to pray to the heaven and earth for good health of a princess.

The relics tell that the Korean ancestors would perform sacrificial rites in the small basin of Hyangdo Peak.

The new findings prove more clearly that the Koreans have regarded Mt Paektu as the sacred ancestral mountain of their nation.

Kim Hyon Ju

Mineral Water Bathhouse

HUNDREDS OF YEARS ago a peasant in Kangso area saw a crane doing strange behaviours near a paddy field. The bird was limping, and it dug the ground with its long bill, and drank the water which gathered

in the hole or applied it on its injured leg. Several days later the crane flew high in the sky. Now the peasant ran to the spot and dug it. When he dug about 50 cm, a gush of water spouted out. He scooped and drank a handful of it—it had a metallic taste but was refreshing. Since then he drank it frequently. When he had indigestion, he drank it, and it helped digestion well. This is how the Kangso mineral water was discovered.



► go to this bathhouse. So I receive treatment here with the kind help of doctors and guides, and my condition gets better.”

Kim Ok Hui, a woman who came to the bathhouse for treating her diabetes, said, “I knew that insulin should be used in treating diabetes, but since I began to get bathing treatment along with appropriate exercise

and diet, I have not used any medicine.” She continued to say that several days before a woman with obesity had returned home after successful treatment.

According to An Hye Ran, a doctor of the bathhouse, thousands of people received bathing treatment at the bathhouse and they favourably commented upon it. She said some people

had said that they only recognized the Kangso mineral water as drinking water, and that they found it really good to get bathing treatment using the mineral water at the bathhouse.

The doctors and guides of the bathhouse are putting effort into raising the quality of their service to the customers.

All of the customers say that they could drink the clear and pure mineral water to their heart's content in the past with modernization of the factory and that they now receive the bathing treatment using the water, which is good for long life.

Today more and more people are visiting the bathhouse of the factory.

A lot of people come to drink the mineral water and receive treatment.

*Article by Kim Il Bong
Photos by An Jong Min*



Water Factory has begun to use the water in bathing for treatment. Kim Yong Sun, head of the bathhouse, says, “When bathing, the free carbonic acid gas penetrates into the body through the skin or the respiratory organs. The redistribution of blood is caused by its action. Quick circulation and redistribution of blood help the blood flow into peripheral blood vessels, reduce the burden of the heart and big blood vessels, and improve the function of the coronary blood vessel and the nutritive function of the heart.”

The bathhouse has a warm water bathroom and a hall where people bathe only their legs for treatment. Pak Kun Song, an

old man who had gotten a bathing treatment at the bathhouse for ten days, said, “I felt heavy for chronic heart failure and autonomic nerve disturbance several months ago. At that time my section doctor advised me to





The Kumyagang Army-People Power Station.

Army-People Cooperation in Construction Projects

EVERYWHERE IN KOREA there can be seen many buildings bearing the “army-people” phrase in their signboards, including army-people street, army-people hall, army-people gymnasium, army-people reservoir, army-people fishing farm and army-people power station. They are named so because they are the result of joint efforts of the army and the people.

The Korean People’s Army is not only discharging its mission as defender of the country but also playing a role of artist of the people’s happiness.

When natural calamities hit Yangdok County, South Phyongan Province, the soldiers turned out in the struggle to help people in the disaster ar-

reas, and thus made a contribution to the campaign to restore the areas in a short span of time. At the time a new bridge was built thanks to their sincere effort, and the local inhabitants call it Army-People Bridge.

The Wonsan Army-People Power Station in Kangwon Province, too, is associated with the devotion of the soldiers. They participated in the construction of the power station together with the provincial people, always carrying out difficult tasks in the van. When the construction was nearly completed, they were given a task to pull down a temporary structure set to control the flow of water. It was an underwater job as dangerous as life-staking adventure. Howev-

er, the soldiers, who volunteered to undertake the work, cut their way through the distance of over one kilometre and finally opened a valve of the tunnel in the temporary structure. A roaring current of water burst out raising a great spray.

The man who was the head of the death-defying team said, “The moment we opened the valve we could not help shedding tears remembering the image of one of our commanding officers. Even though he had been diagnosed with an incurable disease, he never left the construction site to lead the project. At the last moment of his life he asked us to complete the power station at an early date and bring pleasure to Supreme Commander ▶

Kim Jong Un.”

In December 2016 the Supreme Leader visited the completed power station. Looking it round he said that the dam of the power station felt like a demonstration of all the soldiers and people’s determination to throw in their lot with the Party even if the sky falls over and over again and the invincible might of the army and people who are firmly united be-

hind the Party.

Later the soldiers played an active role in constructing power stations consecutively in the areas of Hoeyang, Ichon, Kosong, Kumgang and Phyonggang.

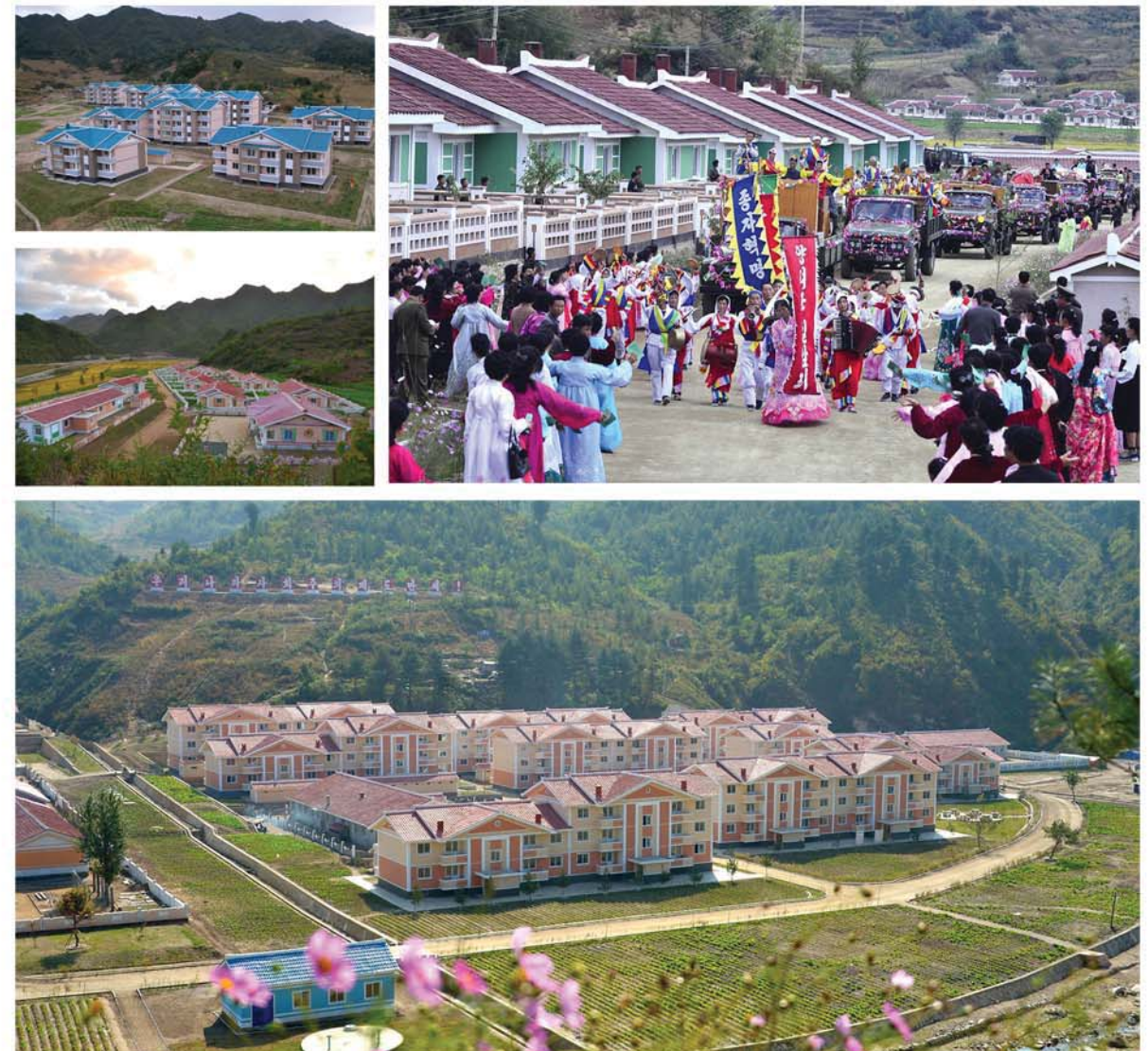
Under the slogan *Let us take upon ourselves both national defence and socialist construction!* the People’s Army is now playing the vanguard role in the construction projects of Samjiyon County, the Wonsan Kalma

Coastal Resort and the Yangdok Hot Spring Resort in South Phyongan Province.

Thanks to the devoted efforts of the soldiers who consider the work of defending the country and creating the people’s happiness as their duty, socialist construction is making headway at an ever higher rate and the army-people creations are increasing uninterruptedly.

Sim Hyon Jin

Inhabitants of the Yangdok Hot Spring Resort move to new houses.



Forty-nine Years with National Flower



ONE MAY DAY IN 1971 A 17-YEAR-OLD girl, fresh from secondary school, stepped into the compound of the Central Botanical Garden. It was the first day of Kim Sun Hui's work at the garden. She found her workplace just to her liking—thick groves and plots with various plants in bloom.

The following tells why Sun Hui volunteered to work as horticulturist.

As a child, she unusually loved flowers. She liked playing with wild flowers. In spring and autumn she would climb up hills and mountain in her village to plant and tend flowers and trees together with her friends. After her family moved to Pyongyang from Ryanggang Province where she was born, she would tend flowers in pots at home. Therefore she chose to grow flowers though she was offered the job of hairdressing and the like.

At the time when she started to work at the botanical garden, there was going a project to lay a magnolia plot. Sun Hui wanted to take the lead in tending magnolia which is the national flower of the country loved by all the Korean people. So she led the others in finding out hundreds of magnolia trees in mountain valleys in Yangdok and Maengsan and transplanting them safely in the botanical garden.

Later she hardly left the field, tending the plants. Nobody knew when she went to and back from work. Every morning she was the first to go to the plot and examine the condition of the saplings. And she felt satisfied only when she had carried out a twice or thrice greater task than others in applying fertilizer.

Her strenuous efforts bore fruit: The saplings took root firmly, and large, white and fragrant flowers bloomed on them.

Then Sun Hui got busier. The trees require much moisture in the blooming season. If they lack moisture, the roots are retarded in growth with the leaves and flowers becoming small. As a result, the flowers fall soon. So Sun Hui, even after her colleagues went home from work in the evening, watered the trees with great sincerity. Yet she knew no physical exhaustion. She took great pride in making the flowers bloom. They say interest outdoes fatigue.

Not content with tending the trees, she took an active part in propagating them.

She says, "I planted the seeds of the trees I had gathered for the first time, but none of the seeds sprouted, so I sank to the ground and wept all day long."

Realizing that she could not obtain what she wanted with a desire alone, she visited botanical researchers to learn detailed information about the growth of the plant, and studied relevant data at libraries.

At last the seeds she planted the next year all sprouted. Then she more enthusiastically strove to propagate the plant in different ways, which were successful. She then found out the most rational methods of propagating and cultivating the plant. In the course of this she was promoted to leader of the workteam.

It is over 30 years since then, and she has propagated more than 10 000 magnolia trees. She was awarded the title of Merited City Caretaker in 2012, and participated in the Fourth National Conference of Mothers and the functions to celebrate the 70th birthday of the Workers' Party of Korea.

"The national flower symbolizes a country and nation. I feel my heart clean and fresh whenever I see magnolia, our national flower. It has the qualities of elegance, firmness and simplicity that reflect the spirit of us Koreans. I don't think my job is merely the one of tending flower trees. I regard it as the work to imbue our people with ardent love for our country." This is what she says whenever she is advised to retire and enjoy the rest of her life, looking after her little grandson.

She has lived faithfully for nearly 50 years while finding great pleasure and pride in propagating magnolia across the country.

People find the truth of patriotism in the way she is devoting even her late years to the cultivation of the magnolia trees.

Rim Ok

National Intangible Cultural Heritage (38)

Basics of Korean National Dance

MOVEMENTS OF KOREAN national dance already began to form in the period of Ancient Korea.

According to *Samgukji* (Romance of the Three Kingdoms), the people of Ancient Joseon, in October ever year, enjoyed themselves dancing and singing over varieties of dishes they prepared, pleased to have a good crop that year and hoping for another good crop of the following year. Dancing, it is said, was the main part of the celebration called *muchon*.

The main dance movements in the ancient period included drawing, shouldering, winding, treading and stamping.

In the period of Koguryo, the first feudal state in Korea, there were further developed dances that reflected the feelings and emotions of the nation.

Murals of the dance tomb and the Mausoleum of King Kogugwon show dancers with all their arms raised in front or sideways, and the height of the arms is not beyond their shoulders.

Almost all pictures of dancers in long-sleeved clothes show the

sleeves all hanging down. So it can be said that "Dance in Long-sleeved Clothes" of Koguryo consisted mainly of such movements as raising and lowering arms gently to the music.

"Tabor Dance" of Koguryo was the one in which dancers danced while beating tabors hanging from the neck or held in hand. This can be seen on a mural of the aforementioned mausoleum. The movements of the dance are now adopted by tabor players in traditional peasant dances, and used in creating dances on modern themes.

The movements of time-honoured national dances have now improved in taste and charm inherent to the nation.

The once-famous dancer Choe Sung Hui (1911–1969) travelled every nook and corner of the country to find out all of traditional dance movements, arranged them properly and synthesized the dance movements which correctly preserve the inherent characteristics of national dance. Choreographers and entertainers integrated the

main movements of national dance, and systematized them on a more scientific basis.

Thus the book *Basics of Korean National Dance* that systematizes each movement of dance in detail and in depth was published, and a relevant documentary was created.

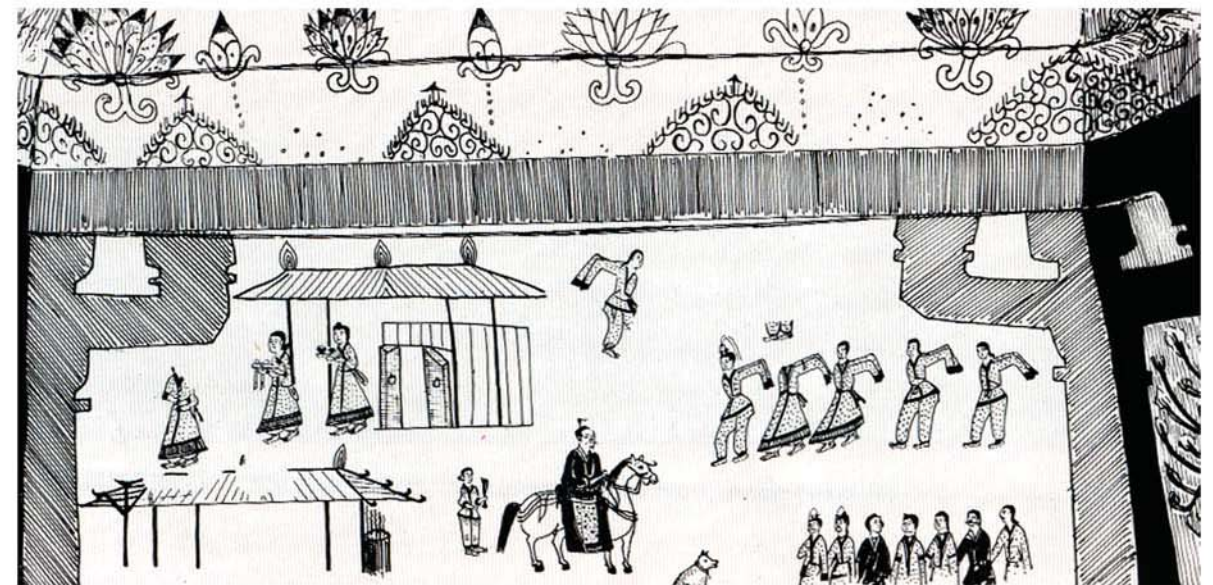
Relevant educational institutions are using the book to train dancers, and all art troupes are creating varieties of dances on the basis of the basics.

And national dances are spread to the public, and people enjoy dancing on holidays and red-letter days.

The book *Basics of Korean National Dance*, a collection of gentle yet powerful Korean dance movements, is a precious treasure of the nation.

The book that helps any Korean to learn and dance national dances with ease and that serves as a solid foundation for the development of national dancing was registered as No. 72 on the list of the national intangible cultural heritage.

Rim Ok



Victory in Store for Cuban People

THE ECONOMIC, TRADE and financial blockade of the United States against Cuba is continuing for 60 years, but the Cuban people, as they have shown until today, will thoroughly smash the US's blockade and sanctions. They frustrated the sabotage of the terrorists and the aggression of mercenaries, and are staunchly overcoming the economic blockade. Though some of the US authorities are persistently resorting to vicious moves while inciting a hostile atmosphere, Cuba will emerge victorious in the showdown with the US.

This is part of a speech delivered by Raul Castro, First Secretary of the Central Committee of the Communist Party of Cuba.

In the early 1950s an armed unit was organized with workers, peasants and intellectuals, and preparations were made for an armed uprising on a nationwide scale. The Cuban revolutionaries, under the command of Fidel Castro, established a guerrilla base in Sierra Maestra, and expanded the armed unit. In the course of this the Cuban revolution developed into an all-people resistance movement to overthrow the Batista dictatorship.

On January 1, 1959 the Cuban revolution won victory. The hostile forces, however, have consistently pursued the hostile policy against the country.

Last year the US invoked notorious Helms-Burton Act against Cuba and appropriated tens of millions of US\$ for expenses of the plan 2020 to topple

the Cuban government. Owing to the US's persistent financial blockade and trade embargo Cuba is suffering huge economic losses. According to the data available the damage the country has suffered totals US\$ 922.63 billion.

In coping with the hostile forces the Cuban people, with confidence in the victory of revolution, are united to break through all difficulties.

Miguel Mario Diaz-Canel Bermudez, President of the Republic of Cuba, in a national conference of administrative officials, called on them to solve by themselves the problem caused by the shortage of fuel, and further consolidate the unity. Adding that they should solve all problems creatively and think of the country first, the President asserted that it was important to understand well the prevailing complicated international situation caused by the US's hostile policy and the flunkeyism of some countries that are following it. He also stressed that the unity, discipline and control should be intensified in order to tide over the difficulty whereby the supply of fuel is being cut off, and that it is needed to raise the comprehensive analytical ability and make exact demands in work.

Now the Cuban government is focusing its efforts on implementing 30 items of investment plan on tourism including repair of roads and bridges, on special development zones and on major projects until 2020. This is the

main way to revitalize its economy under the condition that it is short of fund and fuel due to the US's economic, trade and financial blockade.

Despite the US's tenacious blockade Cuba put a great effort in the development of tourism, and thus the tourist income in 2018 increased to 17.6% as compared to that of the previous year.

Another public health facility for promotion of the patients' health opened in Havana. It is a centre for treating Alzheimer's disease. The World Health Organization has announced that over ten million people are suffering from the disease in the American region alone, and that the number of the relevant patients increases every three seconds. The inauguration of the centre gives hope to the cases in the region.

Today the Cuban people are conducting many-sided cooperation with a lot of countries in the fields of education, culture, public health, sports and the arts. Like they won victory in the struggle against the hostile forces in the past, the Cuban people are continuing their struggle to bring about victories by overcoming the tenacious sanctions and blockade by themselves and further strengthening their unity.

The Korean people are extending enthusiastic support to the Cuban people who are struggling with confidence in the victory of socialism.

Kim Il Ryong

Dangerous Policy of Territorial Occupation

THE AMBITION OF taking Tok Islets from Korea is daily growing stronger in Japan. The Japanese Minister of Defense made an absurd remark that the islets are "surely the native territory of Japan in the light of both historical facts and international law," and a member of the Diet overtly said that the "Self-Defense Forces" should be dispatched to drive out the "illegal occupants" and that there is no other way but to retake Tok Islets through war.

Tok Islets are the territory the Korean nation explored and began to live in before Christ, and the territory is nothing to do with Japan that came into being after Christ. Geographically, the islets are 218 km northeast of Cape Ryongchu of Uljin County, North Kyongsang Province, Korea, but remarkably farther away from Japan.

That Tok Islets belong to Korea is clearly recorded in not only the old Korean documents *History of Koryo*, *Chronicles of King Sejong: Geography and Chronicles of the Three Kingdoms* but also old Japanese documents. A confidential document opened to the public in Japan in 2015 contains the fact that when the Japanese Cabinet asked the chief of Oki Islands of Japan what he thought of Tok Islets in the early 1900s, he replied that "both Ullung Island and Tok Islets are originally located in Korea's East Sea."

The legal status of Tok Islets as territory of Korea was confirmed in international documents such as the Cairo Declaration, the Potsdam Declaration and memorandums Nos. 677 and 1033 of the Supreme Headquarters of the Allied Nations signed and made public during and after World War II.

The Japanese politicians,

however, are insisting that the historically and internationally recognized, sacred territory of Korea is theirs. This enables anybody to judge without difficulty how vicious, immoral and shameless they are.

What is more serious is that such gangster-like insistence is not merely the opinion of individual Japanese figures but the standpoint of the Japanese government.

Last year the government, in the name of the Ministry of Education and Science, published primary school textbooks of social subjects that claim "Japanese dominium over Tok Islets," thus imbuing the students with the distorted historical and territorial idea that "Tok Islets are native territory of Japan which are now illegally occupied by a foreign country," and that "Japan is continuously protesting about it."

Meanwhile, the Tokyo Olympics Organizing Committee had the impudence to put on its homepage a map that marked Tok Islets as "territory" of Japan and the East Sea of Korea as "Sea of Japan." In this regard the Cabinet Chief Secretary made a naïve argument that they took into consideration Japan's dominium over "Takeshima (Tok Islets)" and its position in the "Sea of Japan."

Besides, there are going on undisguised attempts in Japan to seize Tok Islets, such as the designation of the "Day of Takeshima," under the active patronage and involvement of the government.

And the Japanese government regards Kuril Islands of Russia and Diaoyu Island of China as objects to seize, and is desperately insisting on their dominium over them.

The Japanese government's

policy of territorial occupation, as policy of invasion accompanied by war, is driving the situations in and around Korea to a serious stage.

Japan is a past war criminal, and now quite likely to commit war again.

Though it is 75 years since its defeat, Japan is still stubbornly refusing to sincerely apologize and compensate for its past crimes. On the contrary, its politicians visit Yasukuni Shrine that houses the name tablets of war criminals, vindicating and praising them. And the constitution adopted to prevent another war crime in Japan has already been reduced to a shell, and the government is trying to revise it to legalize war. The Japanese "Self-Defense Forces" formed solely for defence has expanded into an offensive armed force equipped with modern weapons, and it is practising war methods through steady overseas activities.

Thus Japan has accelerated the preparation for reinvasion without admitting its war crime unanimously recognized by the international community. It has now completed the preparation, which is already in the state of practice. This can be proved by the way the country is promoting the aforesaid policy on a full scale.

An absurd dream cannot come true, but only results in a serious aftermath. This is substantiated by the tragic end of the old Japan that embarked on overseas invasion with the absurd ambition of the "Greater East Asia Co-prosperity Sphere."

Japan is, however, still on a headlong rush to its more serious ruin, oblivious of the lessons of history.

Kim Il Bong

Mt Kumgang (11)

Sea Kumgang

SEA KUMGANG IS A scenic spot situated on the east coast of Outer Kumgang. It divides into Samilpho (Lagoon Samil) and Haegumgang (Sea Kumgang) districts.

The lagoon was named so after a story that in olden times a king went there to have a rest for a day but stayed for three days (samil in Korean), fascinated by its wonderful scenery. As its water is so clear and calm that the ancestors said it looks like a mirror dropped by a fairy. When you are on the lagoon, you feel as if

it was a lake in deep mountains.

Sea Kumgang provides a scenery of sea at Mt Kumgang. From of old, it is said that without seeing Sea Kumgang one can never know the beauty of Kumgang.

Sightseeing in Sea Kumgang starts with seeing sunrise. Breathing fresh morning air carried in the sea breeze on a white sandy beach, you can see a spectacular scene of the sky, sea, clouds and islets reddening under the rising sun.

Sightseeing in Sea Kumgang needs no trouble to cross a high and steep peak or climb a rock

about the size of a house, but walking along the shore in a wet fog while getting your feet wet in the sea water.

To see its mysterious natural scenery, you'd better see it from a ship on the sea. Then you can see Chottae (candlestick) Rock, Kumgang Gate, Jwi (mouse) Rock and Koyangi (cat) Rock.

Sea Kumgang also has Sea Manmulsang, including small and big peaks rising up to make low hills and deep valleys, various shapes of fantastic rocks, waving seaweeds such as tangle and varieties of fishes.

In the Chongsokjong area ▶

Sea Kumgang in glow.



Chongsokjong.

▶ cliffs consist of hexagonal or octagonal pillars and other basaltic ones, which are vertical or slightly slanting, covering a distance of 1 000 metres along the seaside.

The caves in the stone pillars are very conspicuous along with their legendary tales. Examples are Sason (four spirits) Pillar where it is said four spirits had been to play; a stone bridge with a story that a powerful man cut the Chongsok pillar to lay a bridge to the Palace of the Sea God, but gave up attracted by the charming scenery of Chongsokjong; Pupu (couple) Rock and Kobuk (turtle) Rock.

Pupu Rock has a legendary tale: In olden times there were

over ten cottages on a sunny hill upside Chongsokjong. One of the cottages was in an isolated place of the village, whose couple was on bad terms. They often quarreled and finally decided on divorce. They packed their things and left home. Just as they were going to step apart on the hill of Chongsokjong, they suddenly heard ice bursting into the sea along with a voice shouting, "Stop, there!" They looked back and saw a couple of rocks—a husband rock facing the wife and a wife rock facing the husband. They said, "I know you're in discord. Then what about living with me from now?" When the couple looked up carefully at the rocks again, there was a beauti-

ful woman standing in front of the husband and a handsome gentleman approaching the wife slowly. At last they promised to be new couples and returned to their native village. When they woke up the next morning, they saw that the new husband and wife were themselves. Then they heard the sound of rough waves and the voice of the Couple Rocks, saying, "Listen carefully. You're the couple blessed by heaven. You'll be happy when you live in harmony with each other."

Afterwards, they lived on good terms and there was no couple on bad terms in the village.

Pak Thae Ho



동자혁명

양귀비꽃
선암의

