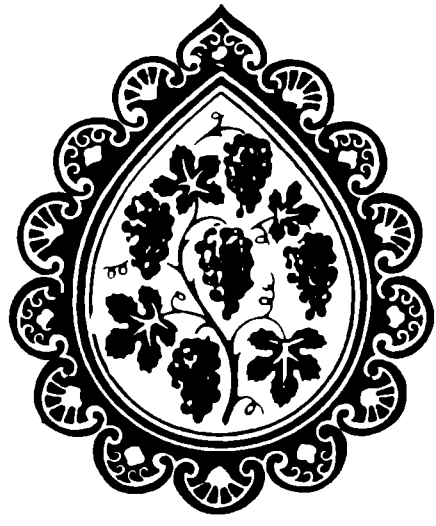
PAVEL LUKNITSKY

SOVIET TAJIKISTAN


LENINABAD
KIRGHIZ S.S.R.
CHINA
GARM
TAJIK S.S.R.
STALINABAD
UZBEK S.S.R.
KULYAB
HOROG
AFGHANISTAN
PAKISTAN
KASHMIR

ПАВЕЛ ЛУКНИЦКИЙ

СОВЕТСКИЙ ТАДЖИКИСТАН



ИЗДАТЕЛЬСТВО ЛИТЕРАТУРЫ НА ИНОСТРАННЫХ ЯЗЫКАХ
Москва 1954

PAVEL LUKNITSKY

SOVIET TAJIKISTAN

FOREIGN LANGUAGES PUBLISHING HOUSE
Moscow 1954

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AUTHOR'S NOTE

I WAS BORN in St. Petersburg (now Leningrad) in 1902, and I live there to this day. There I went to school and graduated from the University (Department of Philology). There I started on my literary career. During the whole period of the siege of Leningrad I was on the Leningrad front.

My first literary work was published in 1922 (I began by writing poetry), but very soon I felt that I lacked sufficient knowledge of the life I wanted to write about.

The entire country was passing through the greatest transformation that had ever taken place in history, and I realized that one could not write about Soviet life watching it from one's study window. I had an inclination for travel, and so I decided to take part in the scientific expeditions which went out to the numerous, at that time little explored, regions of the U.S.S.R. I sat down to prepare myself for this work and studied geology, geography and ethnology. The knowledge I acquired gave me the right to join in a geological expedition to Pamir. That was in 1930. During the expedition I engaged in geological work. Travelling conditions were very hard, but for all that the expedition carried out all the work that had been assigned to it.

In subsequent years I took part in other expeditions organized by the Geological Committee and by the Academy of Sciences. In the course of three years I travelled in Pamir on horseback and on foot over ten thousand kilometres.

I came to love this high-mountain region, and since then Tajikistan has been my second motherland. I visited it every year, except for the

years of the Great Patriotic War, which I spent at the front in the capacity of a TASS special war correspondent.

My own explorations and discoveries (I discovered Peak Mayakovsky, 6,500 metres above sea level, i.e., 1,000 metres higher than Mount Elbrus, the highest mountain in Europe; I also discovered several glaciers, etc.) found recognition in my election as a member of the State Geographical Society.

I have travelled a great deal in other places, too. I accompanied Academician A. Y. Fersman in his Arctic expedition, and other scientists in their expeditions to Eastern Siberia, Kazakhstan and many other regions of the U.S.S.R. During the Great Patriotic War I was with the Soviet Army that was liberating Rumania, Bulgaria, Yugoslavia, Czechoslovakia and Austria.

But nothing could keep me away from my beloved now flourishing country Tajikistan, from the people who literally under my very eyes had leaped across a thousand years—from feudalism to socialism.

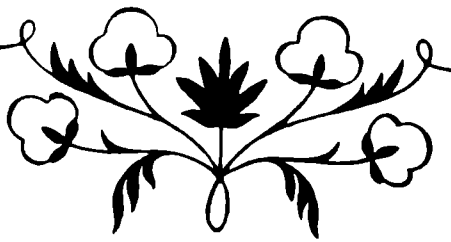
That is why my literary work during the past quarter of a century has been almost entirely devoted to the Tajik people, about whom I have written nearly twenty books—novels, sketches and short stories.

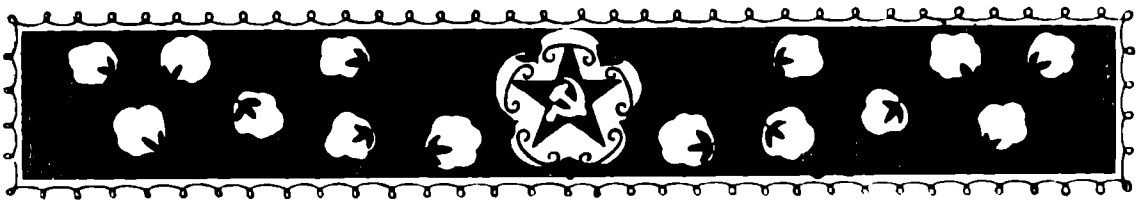
My novel *Nisso,* which deals with the period of the establishment of Soviet rule in Pamir, has been translated into many foreign languages.

The present book *Soviet Tajikistan* (abridged in this translation) is not a novel, but a plain, factual description of the Soviet Tajik Republic, a short history of that country under Soviet rule. My aim in writing it was to tell the reader briefly, even at the risk of being dry, what this country was in the past, and what it is now.

P. LUKNITSKY

INTRODUCTION





Soviet Tajikistan is a land of sunshine, a land of the purest air, and of water that rushes echoing from steep mountain sides. It is a land of flourishing valleys and of deep, narrow gorges; the rugged peaks of mountains capped with eternal snow mark a white sky-line above the valleys, which, too, are white with flowering cotton.... Cotton is the pride and glory of Tajikistan, the happiness and hope of the Soviet people who exert their labours there. The cotton harvest is the measure of the republic's achievements and successes.

In the valleys and at the foot of the mountains beautiful, picturesque towns and collective farms are developing, sheltered from the scorching sun by luxuriant, shady orchards abounding in apricot and pomegranate, peach and apple, almond, plum, mulberry and grape-vine.

On the green slopes of the foot-hills and in the high mountain pastures graze hundreds of thousands of fat Hissar sheep, cows and goats, and numerous droves of thorough-bred horses. Livestock breeding and fruit-growing are Tajikistan's second pride. In the magnificent, shady orchards and between the cotton rows in the fields the rush of water from the mountains is curbed by irrigation canals and ditches. The watering of the thick stratum of fertile loess soil calls for much ingenious human effort, but in the autumn this labour of the Soviet people is rewarded by an abundance of all the fruits of the earth.

On the mountains, which for ages had kept secret the wealth hidden in their depths, mines have been sunk and concentration plants have been built, and this development is expanding; electric engines, hauling

trains of ore trucks, penetrate more and more deeply into the mine tunnels, and to the sound of rattling perforators precious ore is loaded into the trucks. Turbines convert the energy of mountain streams into electricity, and everywhere Soviet people are compelling machines to do the work of man; electric light is dispelling the gloom of former ages.

The mining industry is the third pride of the Tajik Republic, the youngest, but one which marks a new phase of its socialist development.

But not only mining. Tajikistan is successfully developing numerous other branches of industry, and already tens of thousands of industrial workers are working in this land of lofty mountains, which are crowned by the highest summit in the U.S.S.R.—Peak Stalin.

In close friendship with the great Russian people and with all the other peoples inhabiting the Soviet Union the Tajik people are fighting in the cause of communism, world peace and the happiness of all mankind.

What was the territory of Soviet Tajikistan in the past? What peoples inhabited it? When did the Tajik people take shape as a nation?

The first states of remote antiquity that arose in that part of Central Asia which now forms the Tajik Soviet Republic were Bactria (south of the Hissar Range and in the upper reaches of the river Amu Darya), and Sogdiana (north of the Amu Darya, in the basins of the rivers Zeravshan and Kashka Darya). About 2,500 or 2,000 years before the present era, Sogdiana and Bactria were already densely populated states; their inhabitants carried on a high-level agriculture, were able to build extensive irrigation systems and engaged in trade and handicrafts.

These Sogdians and Bactrians are regarded as the ancestors of the present-day Tajiks.

For centuries Sogdiana and Bactria were subjected to numerous conquests. Their peoples waged a heroic struggle against the conquerors, now making progress in their development and now falling into decline. Greeks, Arabs, Mongols and other peoples invaded and laid waste to the country and built their own states, which expanded and

then collapsed, and in their place other states arose. Languages, customs, habits and religions intermingled and mutually influenced one another. The ancient trade routes from Europe to China and from Siberia to India ran through Central Asia. Trade relations caused a further intermingling and interaction of the different cultures.

About a thousand years ago in the territory of ancient Sogdiana and Bactria the Tajik nation took shape; its language was close to the modern Tajik language; it had its own form of writing and its own literature, and already at that time it had poets like Rudagi and Firdousi, and philosophers and scholars like the celebrated Tajik encyclopaedist Avicenna (Abu Ali ibn Sina).

About five hundred years ago, in the sixteenth century, the Khanate of Bukhara was formed; it included part of the territory of present-day Tajikistan.

Under the rule of the barbarous Emirs of Bukhara, who engaged in predatory wars and cruelly oppressed both the Uzbek and Tajik peoples, the country shackled by feudalism and befogged by religious fanaticism fell into utter decline, and the people lingered in a state of rightless slavery and ignorance.

Ninety years ago, in 1861, the systematic penetration of Russian troops into Central Asia began. In 1868 the Khanate of Bukhara became a vassal state of tsarist Russia.

Like the other peoples of Central Asia, the Tajik people came into close contact with "two Russias," as Lenin expressed it: the Russia of the autocratic tsars and their henchmen, and the Russia of the great Russian people, the Russia of Belinsky and Chernyshevsky.

On the one hand, the Tajik people groaned under the double yoke of tsarism and the Emirs; on the other hand, they for the first time gained access to the advanced culture of the Russian people and were saved from being conquered by Great Britain and from being converted into the latter's colony.

This determined the entire future of the Tajik people. Russia was advancing more and more rapidly towards the revolution which was the salvation of all the peoples in the Russian Empire who were groaning under the tyranny of tsarism.

At last came the Great October Socialist Revolution.

On November 22, 1917, the Soviet Government issued an appeal signed by Lenin and Stalin to all the Moslem working people in Russia and in the East. This appeal contained the following statement:

"Henceforth, your faith and customs, your national and cultural institutions, are proclaimed free and inviolable. Arrange your national life freely and without hindrance. That is your right. Know that your rights, like the rights of all the peoples of Russia, are protected by the entire might of the revolution and of its organs, the Soviets of Workers', Soldiers' and Peasants' Deputies."

The October Revolution liberated the Tajik people, who at that time had no state sovereignty, for they were living in territory that was divided between the Russian dominion of Turkestan, ruled by a Governor-General, and the Khanate of Bukhara.

On May 1, 1918, on the proposal of Lenin and Stalin, Turkestan was proclaimed an Autonomous Soviet Socialist Republic within the R.S.F.S.R.

Because of its geographical situation, Stalin called Turkestan "a bridge connecting socialist Russia with the oppressed countries of the East," and he considered that "the consolidation of Soviet power in Turkestan may exert a supreme revolutionizing influence on the entire East."

The peoples of the East, oppressed by the tsarist government, were beginning to regard Russia as the bulwark and banner of their liberation. The Communist Party's programme of action became the task of raising in every way the cultural level of these backward peoples, of enlisting the labouring masses of the East in the building of the Soviet state, of removing all the restrictions, formal and actual, which had been inherited from the old regime or had arisen in the atmosphere of civil war.

Assisted by the great Russian people, all those who only yesterday had been ground down by slavish toil and had bowed to the all-powerful Oriental despots, the poor, starving, rightless people of the former tsarist colony, became the masters of their land, learned freely to take

command of and exploit its natural wealth. Experienced workers and trainloads of food and manufactured goods were sent to the East to assist and relieve the working people of Turkestan.

The frontiers of the Soviet State were pushed out further and further in the Russian East and ever closer became the ties of friendship between the working people of Turkestan and the workers and peasants of Soviet Russia. The share-croppers and farm labourers of Ferghana, Bukhara and Khiva marched shoulder to shoulder with the Russian Red Army men against their age-long enemies.

From the very first days of the October Revolution, Seid Alim-khan, the Emir of Bukhara, adopted a defiant attitude towards the Soviet government and cruelly suppressed every sign of activity on the part of the revolutionary masses in Bukhara. In 1918 to escape execution many revolutionary-minded Bukharans fled from Bukhara to Samarkand and Tashkent. There they joined the ranks of the Bolsheviks and formed the Communist Party of Bukhara. Bolshevik organizations sprang up in Samarkand, Kagan and Charjui.

Under the leadership of the Russian Communist Party (Bolsheviks) the Central Committee of the Communist Party of Bukhara headed the revolutionary movement against the despotism of the Emir.

At the end of 1919 a special commission to deal with Turkestan affairs arrived in Tashkent from Moscow. V. V. Kuibyshev, the head of the commission, and L. M. Kaganovich and M. V. Frunze, who came to Central Asia after defeating Kolchak and Dutov, worked intensely to fulfil the mission with which they had been entrusted by Lenin and Stalin.

Realizing that Soviet rule was becoming consolidated the Emir hastened to organize all the local counter-revolutionary forces. By the next summer he succeeded with the aid of the British and German imperialists in mustering an army of ten thousand men. The British and German imperialists and the Russian Whiteguards supplied this army with weapons. In Eastern Bukhara the Emir was supported by a militia twenty to thirty thousand strong, commanded by former beks.*

* Provincial governors.—*Tr.*

This militia consisted of men who had been deceived and intimidated by the beks and fanatical mullahs who called for "a holy war against the infidels." The chiefs of the Ferghana Basmachi,* and representatives of the reactionary clergy went to Bukhara to appeal to the Emir for assistance. The counter-revolutionary forces united by the Emir were ready to go into action to overthrow Soviet rule.

The Communist organizations, directed by the experienced and talented organizer Mikhail Vasilyevich Frunze, forestalled the Emir's counter-revolutionary designs. The Fourth Congress of the Communist Party of Bukhara was held in Charjui. It issued an appeal to the working people of the Khanate of Bukhara to rise in armed revolt and to overthrow the Emir.

The armed insurrection began in Sakar-Bazar, in Western Bukhara, on August 23, 1920, and quickly spread through the whole of Bukhara. The national armed detachments of working people that were formed by the Communists entered into fierce engagements with the Emir's forces. The Revolutionary Committee appealed for assistance to the Russian proletariat and to the Red Army. M. V. Frunze, Commander of the Turkestan front, ordered his troops "with all their armed might to go to the assistance of the Bukharan people."

Within less than twenty-four hours the first detachments of the Red Army arrived in Kagan and launched a determined offensive against Bukhara.

On September 2, M. V. Frunze telegraphed to Lenin:

"The fortress of Staraya Bukhara was stormed and captured today by the united efforts of Red Bukhara and our units. The last stronghold of the Bukharan obscurantists and Black-Hundreds has fallen. The Red Flag is flying triumphantly over Registan . . ."

The joy of the Bukhara working people knew no bounds.

On September 14, 1920, at the First Bukhara People's Kurultai (Congress), the establishment of the Bukhara Soviet People's Republic (Jamkhuriyati Bukharo) was proclaimed. V. V. Kuibyshev, who was

* Bandits, participants in the counter-revolutionary movement in Central Asia.—*Tr.*

present at the Congress, performed immense work in liquidating the remnants of Emir rule in Bukhara and in building up the new Soviet Republic.

During the celebration of the third anniversary of the Great October Socialist Revolution V. V. Kuibyshev, as a member of the Turkestan Commission and Plenipotentiary Representative of the R.S.F.S.R., read in the main square of Bukhara a declaration proclaiming the independence of Bukhara. The declaration proclaimed the aims and objects of the Soviet Republic, the renunciation of all privileges formerly enjoyed by tsarist Russia in Bukhara, and the transfer to the revolutionary government of all the land together with all mills, factories and other real estate which had been seized by the autocracy.

That was how the Tajik people were liberated from age-long oppression.

South-east of Bukhara, however, in the remotest corner of Central Asia, where stretch the highest mountains and little-explored valleys, there lived hundreds of thousands of Tajiks who were still waiting for liberation. To this place in Eastern Bukhara the remnants of the counter-revolutionary forces fled. Pursued by the revolutionary troops the Emir sought refuge in the domain of his vassal the Bek of Hissar. Here two hundred and fifty kilometres from the railway, where there was not a single Russian, and where the rule of the Bek was still supreme, the Emir thought he could save himself from the anger of the people. The deposed tyrant chose for his residence the kishlak, or village, of Diushambe, adjacent to Hissar. Several kilometres from this kishlak there was a place of pilgrimage for the faithful—the tomb of the "holy" Mavlono-chorka. From here it was possible, with the aid of the local beys, officials and clergy, to maintain communication with Afghanistan, with the British and German imperialists, and also, through Alai, with the chiefs of the Ferghana Basmachi. With the latter's aid the Emir hurriedly mustered an army of forty thousand men, armed to a large extent with British weapons. In this army there were British and Turkish officers, many hundreds of Afghan horsemen led by the Afghan Consul, Russian Whiteguards, and Ferghana and Turkmen Basmachi.

In Diushambe the Emir struck up a friendship with the horse-thief and bandit Ibrahim-bek, son of Isa-Hoja, a rich bey of the Lokai tribe from the neighbouring kishlak of Koktash, and appointed him "Commander-in-Chief of the forces of Islam."

Blinded by hatred for his people the Emir marched out with his troops and laid siege to a number of towns in which Soviet rule had been established. The government of the Bukhara Soviet People's Republic appealed to the government of the R.S.F.S.R. for assistance in the struggle against the counter-revolutionary bands. From the Soviet forces on the Turkestan front a Hissar Expeditionary Detachment was formed. On November 17 the detachment left Karshi.

On February 21, 1921, the detachment relieved Diushambe. The Emir with his army retreated to Kulyab and later crossed the frontier and fled to Afghanistan. Ibrahim-bek remained on Soviet territory, hiding among his kinsmen somewhere in the frontier zone. In the beginning of April after occupying Kulyab, Garm and other towns the Hissar Expeditionary Detachment reached the frontier on the Amu Darya, thus clearing the whole of Eastern Bukhara of the Emir's troops. Soviet rule was established over the whole country.

In conformity with the treaty concluded with the government of the Bukhara People's Republic the Red Army after liquidating the Emir's bands and thus fulfilling its sacred mission withdrew from the Bukhara Republic. It turned out, however, that bitter enemies of the people had wormed their way into the government of the Bukhara People's Republic, and they, taking advantage of the withdrawal of the Red Army from Eastern Bukhara, organized, with the assistance of the British imperialists, new counter-revolutionary bands in the unprotected frontier area. In Afghanistan the Emir went over entirely to the service of the British imperialists and conducted furious counter-revolutionary activity in preparing foreign intervention. Through his secret agents in the government of the Bukhara People's Republic he tried to undermine Soviet rule. He purchased arms in England and had them smuggled into Soviet territory. In this he was assisted by Ibrahim-bek.

As soon as the Hissar Expeditionary Detachment was withdrawn from Eastern Bukhara—in August 1921—the Emir, counting on the

assistance of his secret agents in the towns of Eastern Bukhara, commenced active counter-revolutionary operations on a large scale. Towards the end of that year direct command of this Basmach movement was taken by Enver Pasha, a Turkish adventurer and Anglo-German agent, who with the aid of Bukharan bourgeois nationalists had secretly entered Eastern Bukhara. The counter-revolutionary bands cruelly massacred the Tajik people, wrecked their towns and villages and drenched the whole of Eastern Bukhara in blood.

In the spring of 1922 a Bukhara group of troops was formed from among the units of the Red Army stationed in Turkestan.

The Bukhara group set out in two directions and on the very first day of its swift march encountered and defeated the Basmachi at Baisun. Exactly a month later on July 14, 1922, it liberated Diushambe and at the end of August it drove the remnants of the routed Emir's bands into Afghanistan. Enver Pasha and his henchmen were killed in battle. Only Ibrahim-bek survived; with his intimates he fled to the wild Sarsariak mountains across the river Vakhsh, around which in this march the Red Army columns had detoured on the right and left.

By September 1, 1922, the revolutionary leaders had taken up their quarters in Diushambe, and from that moment the kishlak of Diushambe, now Soviet forever, became the centre of Eastern Bukhara and subsequently grew into a big city, the capital of Soviet Tajikistan.

The struggle against the bands of Ibrahim-bek who operated in Lokai, south of Diushambe, having his centre in the mountain valley of Yavan, and against other bands roaming in the wild mountains, lasted until the spring of 1926, when Ibrahim-bek was utterly defeated and with the last ten or fifteen Basmachi was forced to flee to Afghanistan. But Soviet development in Eastern Bukhara began already in 1923 and continued at an ever-increasing rate.

By the summer of 1924 there had been set up in Diushambe a Central Executive Committee of Soviets of Eastern Bukhara, which undertook the administration of the vilayets of Diushambe, Kulyab, Karategin and Kurgan-Tyube. Taking into account the wish expressed by the liberated Tajik people to have their own state the Central Committee of the Communist Party passed a decision in favour of forming a Tajik

Republic. In its telegram to J. V. Stalin of July 1924, expressing deep gratitude, the Presidium of the Central Executive Committee of Eastern Bukhara stated:

"The Central Committee's decision allows the Tajik people, while being in the Union of Soviet Socialist Republics, to exist independently, to breathe freely its own air and to determine its own destiny."

Three months later, in October, the national delimitation was carried out, and within the Uzbek Soviet Socialist Republic the Tajik Autonomous Soviet Socialist Republic was formed. In the following February M. I. Kalinin arrived to direct the proceedings of the First Congress of the Communist Party of Uzbekistan held in the city of Bukhara, which had passed to Uzbekistan. The enormous constructive work of forming independent, free Soviet Republics in Central Asia was accomplished.

On March 15, 1925, the establishment of the Tajik Autonomous Soviet Socialist Republic was solemnly proclaimed in Diushambe. The kishlak of Diushambe was proclaimed a city and the capital of the young republic. That day was a great festival for all the Tajik working people. J. V. Stalin telegraphed the following message of congratulation to the Tajik people:

"Greetings to Tajikistan, the new Soviet, working people's republic at the gates of Hindostan. I ardently wish all the working people of Tajikistan success in converting their republic into a model republic of the Eastern countries.

"The Tajiks have a rich history; their past great organizing and political abilities are no secret to anyone.

"Workers of Tajikistan, raise the culture of your country, develop its economy, help the working people in town and country, rally around yourselves the best sons of your motherland and show the entire East that you are the most worthy descendants of your ancestors, firmly grasping the banner of liberation.

"Long live Soviet Tajikistan! I regret that I cannot visit you in Diushambe.

"J. STALIN"

This marked the opening of a new era in the life of the Tajik people.

Six months later, when Soviet rule had been firmly established in Tajikistan and the Tajik people no longer feared that the freedom and independence they had won could be torn from their hands, the 13th Rifle Corps of the Red Army having fulfilled its great liberating mission withdrew from the land of the Tajiks they had liberated. In their farewell message to the men of the heroic Red Army the Tajik people wrote:

"... Now that you are leaving this country whose freedom you step by step restored, you can depart proudly conscious of your great achievements. You are leaving reviving kishlaks, cultivated fields and a people now strong in spirit. You made it possible for our people to resume their agricultural labour and thereby linked them still more strongly with the other peoples of the Union.

"When you reach home, tell the workers and peasants of the U.S.S.R., widely spread the story in the stanitsas of the Kuban and the Don and in the villages of the Ukraine and Russia, about the hard, heroic fight you fought here, and tell them also that here, in the far South, a new member of your family of Soviet Socialist Republics is growing and gaining strength, a new ally in victory, the Tajik people whom you liberated...."

The development of the young Tajik Republic proceeded at a rapid pace. In December 1926 the First Constituent All-Tajik Congress of Soviets decreed the nationalization of the land, waters and minerals, proclaimed the emancipation of women, and introduced universal education. In the northern districts a land reform was carried through. All this, however, had to be done in the midst of a fierce class struggle that raged all over the country.

In 1929 the First Inaugural Congress of the Communist Party of Tajikistan was held. By this time there were in the republic about six thousand Communists who actively put into operation the Lenin and Stalin national policy. Friendship between the peoples grew, the Tajik people became more and more deeply imbued with Communist ideas and worked more and more devotedly and successfully. They began to

build socialism, they entered the struggle for the industrialization of their country and for the collectivization of agriculture; for the first time they planted fine-staple cotton. In all their efforts they followed the example of the Russian people, learnt from them, benefited from their culture and strove to catch up to their level.

The Tajik Republic received immense disinterested assistance from the whole of the Soviet Union and primarily from the Russian people. Thousands of Russian workers, hundreds of school-teachers, doctors, engineers, agronomists and scientists went to work in Tajikistan. Streams of manufactured goods, food and agricultural and other machines amounting to tens of millions of rubles poured into the country.

Under the leadership of the Communist Party the Russian people soon raised Tajikistan to such an economic and cultural level that it naturally created the necessity of transforming the Tajik Autonomous Soviet Socialist Republic, whose statehood was now firmly consolidated, into a Union Republic.

This happy event, marked by scores of subbotniks,* by the arrival of the first train in Diushambe, by work on the creation of the first big industrial enterprises and by enthusiastic work in the first collective farms, occurred towards the end of 1929. On October 16, 1929, the Third, Extraordinary, All-Tajik Congress of Soviets proclaimed the formation of the Tajik Union Soviet Socialist Republic—the seventh Union Republic. Diushambe, the capital, was renamed Stalinabad.

Today the land of the Tajiks is an advanced, flourishing socialist republic which, in fraternal union with the other republics of the U.S.S.R., is rapidly proceeding towards communism. The territory of the Tajik S.S.R. adjoins that of two other Soviet Socialist Union Republics—Kirghizia and Uzbekistan. In the east it adjoins the Sinkiang Province of the Chinese People's Republic. In the south its frontier

* From the word Subbota (Saturday): voluntary work for the benefit of the socialist state performed gratis after working hours. Such work was first organized on Saturday, May 10, 1919, hence the term "Subbotnik."—*Tr.*

adjoins Afghanistan. In the south-east, beyond the narrow 15-20 kilometre strip known as the "Afghan corridor," lie Kashmir and Pakistan.

The Tajik S.S.R. is divided into a group of districts directly under the jurisdiction of Stalinabad, and four regions: Leninabad, Kulyab, Garm and the Gorno-Badakhshan Autonomous Region (Pamir).

Soviet Tajikistan has become an outpost of socialism in the East, a beacon for all the colonial peoples of the East.

In this book we give a description of the development of Tajikistan under the Soviet system.

GEOGRAPHICAL BARRIERS ARE BROKEN

1

TASHKENT has vanished in the mist. The air is again clear and fresh. The azure sky seems to melt into the vast horizon. At this height the heat is not felt. The aeroplane propellers drone evenly and diligently. Twenty-five years ago it would have been audacious even to dream of flying to Pamir, but today it is an ordinary journey performed in a few hours by anyone who wishes to save time and to avoid the inconveniences of the long and tiresome land route. During these few hours the passenger sees Tajikistan spreading beneath him first to the south and later to the east when the course is changed. He sees, as if on a vast relief map, all the variety of its landscape, its lofty mountains, the highest in the Soviet Union, its flourishing valleys, stern, narrow gorges, the vast glaciers and snow-capped mountain ranges, which only recently had been impassable.

What could be seen in these rugged expanses in the past, when the Emir's rule extended over the whole of Eastern Bukhara and over the small mountain domains of the "independent" Pamir feudal princes? Tiny plots of land tilled with the mattock. Wretched adobe huts, or else hovels built of lumps of rough rock. Emaciated dehkans, i.e., peasants, reaping the bey's wheat with sickles. Handicraftsmen and artisans bending over their primitive looms, oil presses or potter's wheels. Caravans of heavily laden asses carrying merchandise over perilous mountain tracks. Teeming market squares, prisons, and the muezzins in the minarets calling the faithful to prayer. Slavery, oppression,

poverty, absence of roads, primitive irrigation canals carrying the water from the mountains to the luxuriant orchards of the Emir, the beks, the beys and ishans. . . .*

What do we see now?

The Dalverzinskaya steppe, intersected by broad canals and ploughed with tractor ploughs. Three mountain ranges lie across the steppe like long, bony fingers—two stretching from the left, from the north-east, where they join the high Chatkalsky Range of the Tien Shan. Those are the Kuraminsky and Kara-Mazar mountains. The third one, short like the little finger, spreads outwards in a south-westerly direction. That is a separate range named Kukhi-Mugul (Mogol-Tau). On its rocky ridges there is no point higher than 1,616 metres above sea level. Along it runs the boundary between the Uzbek and Tajik Soviet Socialist Republics. This boundary, however, is marked only on maps. The friendly family of Soviet Republics in the vast territory of the U.S.S.R. does not seek or fix boundaries in its daily intercourse.

The Kuraminsky Mountains are much higher than the Kukhi-Mugul. One of the summits looming in the mist is 3,325 metres above sea level. All those mountains run round the northern part of the Ferghana Valley. They are arid, rugged and furrowed by gorges. They are covered with grass and provide rich pasture only in the spring.

From the aeroplane one can see large flocks of sheep and herds of goats driven here from the collective farms in the Ferghana Valley. Far away at the exits from the gorges nestle the large kishlaks Ashoba, Dakhana, Shaidon and Asht, which in recent years have become famous as breeders of Angora goats and karakul sheep. These mountains are rich in ores. Extensive mining operations are proceeding and numerous plants have been erected in connection with them. If one were to fly here at night one would see electric lights everywhere on the mountains.

The aeroplane follows the high road, then turns, gains altitude in order to cross the Kukhi-Mugul and at once sweeps down: ahead lies the broad, yellowish Syr Darya River. In the east between the moun-

* Moslem clergy.—*Tr.*

tains and the river stretches a yellowish strip of desert, but it is intersected by the forty-kilometre North Ferghana Canal, and along the canal there is no desert now. Vast collective-farm cotton fields spread out on each side. A still wider canal stretches from the east like a taut silver ribbon along the left bank of the Syr Darya. This is the Stalin Great Ferghana Canal.

From the left aeroplane window we cross over to the right. The Syr Darya and the green island which divides it into two arms are now directly under us; we can see the mighty river washing its left, clayey bank. Between the river and the arid mountain there are luxuriant orchards protected by stone dams from spring floods. To the right, extending along the left bank of the river, we see the big city of Leninabad, the administrative centre of this region. Formerly this was the town of Khojent with its maze of narrow, crooked streets and flat-roofed hovels. Now fine, wide, tree-lined streets run through the city, and along them speed motor-buses and automobiles. Through the trees can be seen large white buildings of Soviet architecture, a stadium, a luxuriant recreation park stretching back from the riverside, the hill of an ancient fort, an open-air theatre, numerous modern houses and factories, among the latter the huge silk-weaving mills—the giant of Tajikistan industry.

The aeroplane heels and the green land around the city seems to rear up and display a broad green zone where the millionaire collective farms are situated—luxuriant orchards, numerous cotton fields as flat as billiard tables, smoothly ploughed with tractor ploughs and divided like a chessboard by rows of mulberry-trees clearly distinguishable from this height. Across this zone run metal pylons bearing electric transmission wires.

The city merges with this magnificent oasis and then appears to emerge from it out into the open steppe, where numerous new blocks of houses have been built, the streets already green with newly-planted trees.

The aeroplane veers. The engines are shut off, and in the ensuing silence the sound of the wind is heard. The wheels touch the ground, the

aeroplane taxis to the air station, and as soon as the door is opened the hot air of Leninabad strikes one in the face.

There are two cargo planes in the port. In front of them are piled bags of dried grapes, dried apricots and selection cotton seed, bales of wool, cases of canned fruit from the local canning factories, and cases of Ura-Tyube wine. The planes are being loaded quickly, but without hurry or fuss.

At breakfast the passengers read the local newspapers, the *Leninabadskaya Pravda* and the *Hakikati Leninobod*. The newspapers contain an article about the most efficient miners in Chorukh-Dairon, a portrait of Tuti Ishanova, celebrated Stakhanovite silk weaver, and an excerpt from a new novel about the Shurab miners by the Leninabad writer Rakhim Jalil.

But there is no time to read it all. The signal is given to embark.

A few minutes later on the left there towers against the sky the Turkestan Range with its dazzling, snow-capped summits, sloping glaciers and deep gorges. It rears up like a wall, and its foot-hills protrude in soft outline into the valley in green velvet mounds, bright and fresh.

They are still far away; beneath the aeroplane spread the vineyards and apricot orchards of Ganchi. Here and there are visible the wineries and villages of big collective farms. Along the roads cattle are being driven to the green slopes of the mountains where there is excellent spring pasture.

Down below among steep hills are the ancient walls and towers of Ura-Tyube, and a little further on spread the collective farms of Shakhristan where once upon a time the ancestors of the present-day Tajiks and Uzbeks resisted the hordes of Alexander the Great, who was striving to reach Ferghana.

Beyond Shakhristan towards the mountains there are fewer and fewer orchards; the climate here is cooler and cotton fields give way to wheat fields spreading on the undulating slopes. We pass out of the irrigated zone into the non-irrigated zone, which rises more and more steeply into the foot-hills. Around Shakhristan droves of horses are grazing—the famous Karabair breed. Flocks and herds are filing along

the tracks through the gorges; here and there are seen the buildings of livestock farms. And everywhere on the mountain streams are small, collective-farm electric-power stations; water is flowing over concrete dams, and there are dense groves near these dams. How free one must feel here! How beautiful are these spots wrested from wild nature by the people who live here!

From here the passenger air liners change their course to south-west to get to Samarkand. They avoid the straight route to Stalinabad, for to go that way would mean rising too high to cross the snow-capped ridges that bar the way. It is easier and safer to go by the roundabout route and to cross the mountains where they are lower.

Now we are going due south, steeply gaining altitude, as if climbing the first, already snow-patched, spurs of the towering, dazzling-white massif.

The Turkestan Range is only the façade, only the first row of the chaotic pile of mountains that make up the territory of Tajikistan and further on beyond the frontiers of the U.S.S.R., in the Kuen-Lun, the Himalayas and Karakorum, the territory of foreign countries. Geologists include the Turkestan Range in the Tien Shan system, which at one time was contiguous with the Pamir—Hindu Kush—Kuen-Lun system. We gaze with awe at this magnificent picture of lofty, jagged peaks, enveloped in cloud and festooned with glistening glaciers.

Beyond the main watershed opens the valley of the river Zeravshan lying deep down between the mountains. The river has its source in the sphere of eternal ice in the deep gorges of Matcha, and it has numerous tributaries that flow steeply from the sides of the Turkestan and Zeravshan Ranges. Its turbulent waters rush westward beyond our view, beyond Penjikent, to where the mountains end at Samarkand, where in the broad valley there are rich cotton-growing, rice-growing and fruit-growing collective farms. Further on, on the way to Bukhara, begins the great plain. After flowing through innumerable irrigation canals and watering tens of thousands of hectares of land, the Zeravshan, now warm and turbid with silt, loses itself in the sands of Kara Kum, in the deserts of Turkmenia, failing to reach the mighty Amu Darya.

Here in its middle course under the wings of our aeroplane the water of the Zeravshan is clear and cold, and in its swift onrush it turns the huge boulders that lie in its bed.

Along its clean-cut terraced banks, like two green borders, lie continuous stretches of orchards, so dense that the houses can scarcely be seen through the foliage. The inhabitants of Zeravshan are not only livestock breeders, but also skilful silkworm breeders and fruit-growers. Abundant crops of apricots and mulberries are obtained here. Here, too, on the steeply-flowing tributaries of the river, we see the white buildings of small, collective-farm electric-power stations, and through the foliage of the kishlak orchards we catch glimpses of the roofs of newly-built schools.

Along the banks of the Zeravshan automobiles are speeding, and yet only a few years ago not a single car could get here. We see a high road which runs across the river. We had caught glimpses of its winding course when we were flying over the Turkestan Range. Here it rises along the bank of the turbulent Fan Darya, which cuts through the Zeravshan Range. Again we rise to a higher altitude in order to pick our way between lofty, snow-capped peaks and cross a ridge of rugged, icy crests.

Lower down on the wooded slopes and in the narrow valleys there are pastures. Here and there are groups of new mine buildings and dwelling-houses. We fly over the dry, high-mountain valley of Yagnob, over the dirt dumps of coal mines and the village of Takfon; to the south-east we see the high-mountain lake Iskander Kul glistening like a pearl in the mountains.

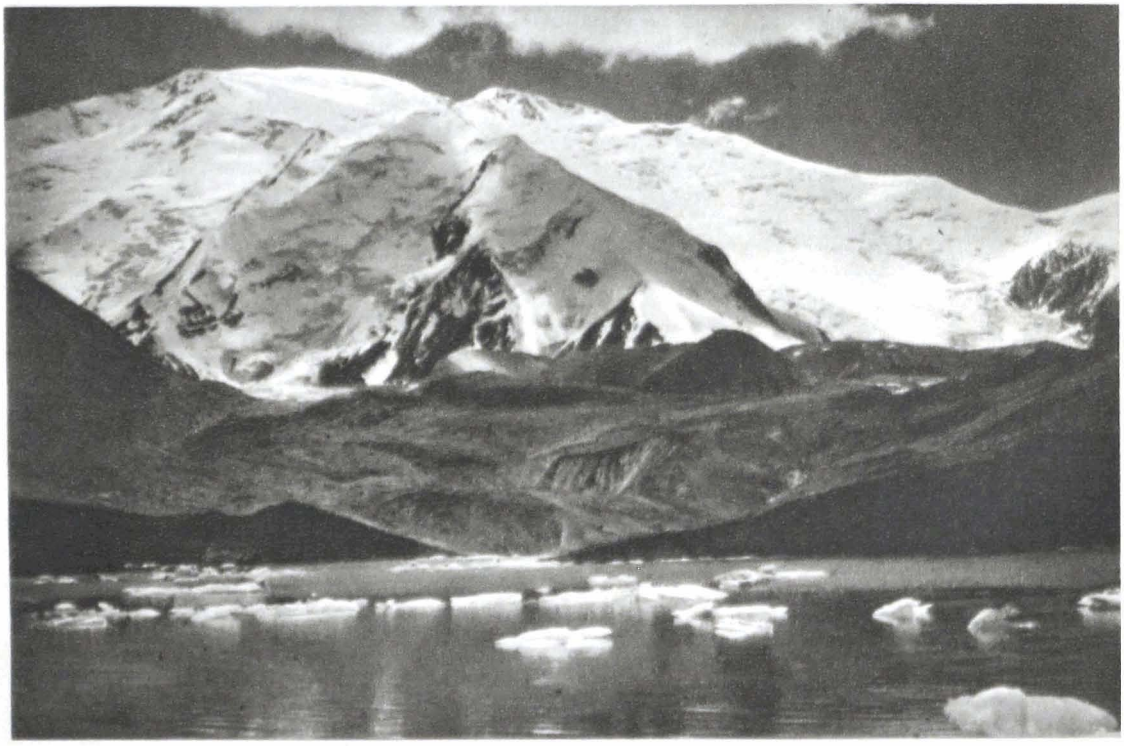
Again we see automobiles climbing up from the Yagnob to the Anzob Pass, the last on the way from Ura-Tyube to Stalinabad. That is the Hissar Range; its average height is four and a half kilometres above sea level; its peaks are almost a kilometre higher.

Finding a corridor in the rolling clouds, twice falling into "air pockets" over the rugged, icy crests, the aeroplane makes a smooth, swift descent. We have crossed the Hissar Range.

Aeroplane over the eternal snow of the Pamir Mountains

Motorbuses on one of the high roads of the Tajik S.S.R.

Gorno-Badakhshan Autonomous Region. The Pamir Highway



Ice Lake against the background of Lenin Peak in the Zaalai Range

2

We cross the border of the Leninabad Region of Tajikistan, a region rich in ores, oil and coal, in cotton, livestock, orchards and vineyards. In this region is concentrated nearly half of the republic's industry—mining, fuel, food, cotton-ginning, silk-weaving and building materials industries, and also the various industries controlled by co-operative societies and local authorities. It is also a region of highly-developed agriculture and of convenient travelling facilities.

The narrow rivers in the gorges rush southward; the gorges cut more and more deeply into the mountains. The mountain pastures give way to plots of non-irrigated crops and later to green patches of orchard in which small mountain kishlaks lie hidden. Further along our route the kishlaks are larger and more picturesque. The beauty of nature is amazing here, and one longs to be in one of those kishlaks, in the shade of cool apricot orchards, which seem to be suspended over the translucent, bubbling streams at the foot of the slopes that are covered with a magnificent carpet of innumerable mountain flowers and plots of waving flax, barley and wheat.

Scattered through the gorge are collective-farm buildings, cattle barns and workshops. We catch rapid glimpses of the dirt dumps at the Ziddy coal mines, of the health resort at the Hoja-Obi-Garm hot water springs, of meteorological stations, quarries, and granaries. Suddenly we come upon a town that takes up a whole gorge: concrete spillways, dams, steep streets, large factory buildings, two-storey brick houses. This is Takob, the centre of a fluor-spar plant set up in 1948. It flashed past and hid behind the huge mountain. Further on is the swift, foaming river Varzob, the rails of a narrow-gauge railway, artificial terraces cut on the slopes of the gorge, some planted with fruit-trees, others with timber. On the banks of narrow mountain streams are rest homes, sanatoria, Young Pioneer camps, playgrounds ornamented with numerous white statues, and again hydro-engineering structures curbing the turbulent rivers—reservoirs, aqueducts, derivation canals and dams. We look back at the ridge we are leaving behind and it seems to rise like a high wall, its snow and ice glistening in the sun. Ahead

in a mist looms a valley, shaped like a flat-bottomed boat. It is much smaller than the Ferghana Valley and it lies much higher, but it is not less fertile. It is still challenged by the Hissar Range, which stretches towards this valley's fields its smooth, undulating foot-hills, ploughed here and there with tractor ploughs.

The foot-hills diverge in various directions. The river Varzob, like the other rivers running parallel with it from the range, rushes in a broad bed into the valley to merge with the mighty Kafirnigan. We see the smoke from the stack of a cement plant. The entire terrace is intersected by cement-lined canals, and beyond we see a big, beautiful city stretching for many kilometres.

That is Stalinabad, the heart of Tajikistan, its capital, its political, cultural and industrial centre.

We have not come here by the ordinary route. The air liner we passed on the way is still slowly wending its way round the mountain ranges we have enumerated. It is now much further to the west of us, somewhere between Samarkand and Kitab, or, perhaps, is approaching Baisun in order, after making the long flight over the Hissar Valley, to arrive here from the west and not from the north as we did, flying by the straight route.

The train that left Leninabad at the same time that we did is making an even slower and wider detour round all the mountains and foothills, and it will come out on the plain on the very border of the Kara-Kum desert. It will have to travel through Samarkand, Karshi and Termez, and that will take forty-eight hours. It left for Stalinabad from the north and will arrive from the south-west, travelling almost in a semi-circle in order to avoid all the branches of the gigantic mountain system which stops at the Kara-Kum desert.

Still forty-eight hours is not a month, for that is how long the journey took before the railway was built, when Diushambe, the future Stalinabad, seemed to the inhabitants of Ferghana to be a very remote place lost in the mountains and of no use to hardly anybody for practical purposes. The first train arrived in Stalinabad in the year the Tajik Soviet Socialist Republic was formed, a quarter of a century ago.

The construction of the Termez-Diushambe Railway caused a

veritable revolution, which at once gave an impetus to the further development of Tajikistan.

At that time the only way of travelling in the mountains of Tajikistan was on horseback, or on foot. In many remote parts of the republic aeroplanes were taken for marvellous birds. The Basmachi who roamed the mountains feared them, but they were welcomed as saviours by snow-bound scientific explorers to whom bundles of food and medicaments were parachuted.

Absence of roads was the curse of Tajikistan. Before the October Revolution there was not a single kilometre of road in Eastern Bukhara. By the time the First Five-Year Plan was started on, three hundred and twenty-six kilometres of road had been built, and another thousand and three hundred kilometres of road came into being of their own accord, as it were—they were cut by the wheels of carts and of the first motor trucks. By the end of the five-year plan period the mountains were already intersected by four thousand kilometres of road, and during the Second Five-Year Plan period, when machines were employed for road-making, the whole of Tajikistan began to be covered by a network of motor roads.

It is interesting to recall that in 1928 there were only seventeen automobiles in the republic. Ten years later six thousand automobiles were already speeding along the roads of Tajikistan. As for the number there now that is known only to the motor-traffic regulation authorities.

The pilot slows down the engines. Heeling steeply as it veers, the aeroplane spirals downwards over the city.

The shadow of the plane glides rapidly over the green grass, the wind hisses softly through the landing gear. Exactly thirty seconds later the wheels touch the warm ground of the Stalinabad aerodrome.

3

It is interesting to walk through the aerodrome and to see the passenger and freight planes going off in all directions.

The variety of freight carried by aircraft in Tajikistan is amazing: bales of cotton, kerosene, turbine parts, silkworm grubs, scent, mineral

fertilizer, radio apparatus and live Hissar sheep. But it is not surprising when you come to think of it, for an hour's flight saves a wearisome week's journey on horseback, or on foot, through the rugged mountains where motor roads have not yet been laid, or are snowbound in the winter. Aircraft carry to Stalinabad even live tigers caught in the jungle of the lower Panj and later sent to the Zoos in all parts of our country.

We are invited to breakfast in the dining-room. The airmen there start an argument about who in Tajikistan was the first to lay the air track to Pamir. There are many men of the younger generation among the airmen and not all of them know the name of the pioneer who laid that track. But there is a man here who was in Horog that morning on August 18, 1930, when airman Baranov and air-mechanic Yanitsky landed their U-142 on the bank of the Panj, near Horog, after a most difficult two hours' flight from Stalinabad. This was Baranov's second flight to Pamir. He made his first flight in 1929.

Baranov flew at a height of six thousand metres without an oxygen mask, with no meteorological forecasts, not knowing what weather to expect. In the event of a forced landing he would have crashed, for at that time there were no landing fields. Today, the Stalinabad-Horog passenger air line is safe, the journey takes an hour, and collective farmers in the Gorno-Badakhshan Autonomous Region make frequent trips to Stalinabad even on private business and often return home the same day. Nevertheless, this track is one of the most difficult in the world. But it is also the most beautiful.

A small ambulance plane lands at the airport. A Tajik woman in a light silk dustcoat enters the dining-room. She is well known here.

"So you have been to Pakhtaabad," says one of the airmen, inviting her to his table.

"How do you know?" she asks with a smile.

"That's not difficult to tell. You are holding a bunch of Kazanlyk roses. That shows that you have been to the Pakhtaabad State Essential Oil Farm."

"Yes, I was called to attend to a woman in child-birth who was having a hard time," the woman answers, sitting down at the table.

This is Sophia Muhamedovna Niyazova, a doctor on the staff of the Medical Air Service and head doctor at the republic Maternity Home in Stalinabad.

Medical Air Service planes make about a thousand flights a year into the mountains to render medical assistance in urgent cases. Needless to say, this service is free of charge.

Similar difficult but invaluable work is performed by the Anti-Locust, Anti-Malaria and other special branches of the Tajikistan aviation service. Tajik women are also joining the ranks of the airmen, women who scorn the paranja* and take air-training courses at the Stalinabad Aero Club. The first Tajik woman to parachute from an aeroplane was Ulmaskhon Davlyatova; she jumped from a height of 650 metres. Lola Yusufbekova, a tenth-grade schoolgirl and Young Communist Leaguer, also became a parachutist. She attended the Youth Festival in Prague.

It is hard to believe that not so very long ago Tajik girls had no right even to learn to read!

4

The engines roar again and Stalinabad slips away from under us. The Hissar Valley, which we quickly cross, attracts us by its wide cotton fields, new orchards recently planted along the offshoots of the Grand Hissar Canal, its farms, agricultural plant-breeding stations, and industrial enterprises, which are linked with the capital by railway and highway. In the eastern corner of the valley looms the city of Orjonikidzeabad with its large flour mills and other plants. To the right, on the south-west, is the hill of the ancient Hissar fort, and somewhat nearer at the foot of the mountain we see a group of about a hundred and fifty tile-roofed buildings and avenues of young poplars—this is the Stalinabad State Farm. It was organized only in 1948 and is run on the most modern lines. All the operations are mechanized and the mechanisms are driven by electricity. All around are well-planned collective-farm villages, the fields of which adjoin and are ploughed throughout with tractor ploughs.

* Oriental veil.—*Tr.*

We leave the Hissar Valley and the full-flowing Kafirnigan, cross the low, arid Rangan-Tau Range and draw near to the subtropical Vakhsh and Panj Valleys, and to the towns of Kurgan-Tyube, Kirovabad and Kulyab.

We could barely see this range and the next one, Jitym-Tau, which we have crossed, for they are much lower than the Hissar and other ranges we have left behind.

We are now flying over what the geographers call the variegated low-mountain district of South-West Tajikistan. In the spring there is no snow on these mountains; it melts and gives a brief span of life to the small rivers which furrow the mountain sides and which in the summer become quite shallow, or dry up completely. In the rainy season all that flows along their beds is liquified clay and pebble stones. The mountain slopes provide spring pasture for large flocks of Hissar sheep famous for their heavy fleeces and excellent meat and fat. When the grass has faded the flocks are driven to the north and east, to the summer pastures in Kukhistan and in the lofty mountains in the Garm Region.

These mountains now fill the whole of the visible left half of our horizon, chain behind chain, towering one above the other, dazzling white in their raiment of eternal snow and ice. This is the western façade of Pamir, the Peter the First and Darvaz Ranges, behind which loom the giant peaks of the Academy of Sciences Range. A multitude of massive, blue-grey mountain tops and watershed ridges are piled up in front of us.

To the right, in the west, run the low Gardani-Ushti Mountains, a continuation of the Rangan-Tau. To the right of them, beyond the Kafirnigan, lies the Babatag Range.

The whole of the vast territory to the south slopes downwards to the mighty Amu Darya which runs through it. The part of this river which runs through Tajikistan territory above the mouth of the Vakhsh is called the Panj.

On the other side of the Panj lies Afghanistan; and the entire territory on that other side rises again to the high foreign mountains.

Under us stretches the Vakhsh Valley, a fertile, flourishing region, the principal base in our country for Soviet-bred sorts of fine-staple cotton. So far these sorts of cotton are not raised anywhere in the world except in the Soviet subtropics.

One hardly knows what to look at first in the vast oasis that spreads beneath us. There is so much that is new. In fact, everything is new here. Cotton fields seem to stretch into infinity; there are hundreds of big and little canals supplying water for the orchards and for the fields, which, like the roads, are bordered with trees. One is conscious of the great harmony introduced here by a single plan. The city of Kurgan-Tyube, set in a huge, green garden, seems to be the centre of the valley, on which all the roads converge. But beyond it there are other centres, equally verdant, and where, also, through the trees, one sees blocks of shining white houses separated by broad avenues. Everywhere there are hydro-engineering structures: dams, sluices and reservoirs.

From above, the big Kuibyshev State Farm, formed by the merging of a number of smaller ones, the fruit-tree nurseries and vineyards look like large shady groves in which one gets glimpses of well-built dwellings, concrete-lined swimming pools, sports grounds, and of glistening, glass greenhouses.

Everywhere there are blocks of newly-planted trees, and in the fields tractors are moving in all directions. On the canals there are small collective-farm electric-power stations, near the villages are the buildings of various kinds of scientific research stations, and all around are vineyards, experimental sugar-cane plots, and trenches in which lemon-trees are planted.

Our plane is approaching Panj. We are flying over the Voroshilovabad District; beyond it is the equally fertile Molotovabad District. Stretching back from the canal are the grounds of the zonal station of the Arid Subtropics Institute. In these grounds they are raising trees formerly unknown in Tajikistan—Eldar pine, eucalyptus and citruses, which, it appears, are capable of growing in this subtropical climate.

On the right, nearer to the bends of the Vakhsh, stretches a hilly district not reached by the canals. A hot, dreary desert; and such was

the picture presented by the whole of the Vakhsh Valley in the past. The hills are overrun with scrub and reeds, reaching down to the small, clear lakes formed in the dried-up arms of the river. This is the famous Tiger Ravine, now a state reservation for wild animals.

Our plane does not go on to Panj, but turns sharply to the east, and passing over this flourishing region crosses at a great height the hot, barren mountain district lying between the Vakhsh and Karasu Rivers. On the right, along the state frontier spreading in the Panj Valley, are the cotton fields of the collective farms in the Kirovabad, Parkhar and Chubek Districts. Their land is also fertile and well cultivated. There a state jute farm was recently established, and jute mills are being erected. The entire valley is just a mass of orchards and vineyards. One would like to get a closer view of them, but the entire horizon in the south is suddenly blotted out by yellow mist. It is not a storm cloud. It seems as though the southern sky is impregnated with some opaque, yellow, poisonous matter. It is what is called here the "Afghan," a withering hurricane, which carries clouds of loess dust into the higher strata of the atmosphere. It raises this dust from the parched soil of Afghanistan, invades our territory, and, sweeping over our fields, kills with its fatal breath the crops wherever there is insufficient water. The "Afghan" is a curse to South-West Tajikistan. It can be combated only if an irrigation system like that in the Vakhsh Valley is built in Afghanistan.

The roar of the engines becomes more piercing. The pilot has put on speed. We turn to the north-east to escape the oncoming yellow wall and fly over extensive thickets of pistachio trees scattered over the hills, across the river Karasu, a tributary of the Panj, and over the green expanses of pasture in its broad valley. We have entered the Kulyab Region.

In the broad valley of the Yakhsu lies the city of Kulyab, the administrative centre of the region. We can see its gardens and shady streets, and its oil-crushing and cotton-ginning mills. It slips past us on the right and we are already flying over the mountains of Jilan-Tau and the rich pastures of the Alim-Tai and drawing near to Dangara. Down below in the hayfields the self-propelled mowing machines

of the newly established Alim-Tai Livestock Farm Machine Station are working; and we see other machines raking the hay and forthwith pressing them into neat bales. Motor trucks are carrying the bales along the smooth roads to the barns of the livestock farms. We also see places where sheep are being sheared with electric clippers. Among the flocks we see the masts of collective-farm radio stations. We see state karakul sheep farms and thorough-bred cattle farms. And here in the villages as everywhere else are the bright, white buildings of schools, collective-farm tea-rooms and recreation clubs.

Dangara is an immensely rich livestock district where every year hundreds of thousands of cattle are driven for the winter, during the months when snow-storms make the pastures in the high mountains in the Garm and Kulyab Regions untenable. These mountains rising higher and higher to the east merge with the highest chains of the Pamirs. We saw them in the distance all the time when flying south, and now, flying north-east, we are drawing close to them. Slipping away from under us are Kangurt, Boljuan and Sary-Khasor, district administrative centres in this mountain region, rich in grain and pasture. To the right we see the rice plantations of Khovaling. The landscape, intersected by numerous mountain rivers, becomes sterner. Mountains rise before us, barrier behind barrier, chain behind chain. Our aeroplane makes a steep ascent. Will it surmount these gigantic barriers? Their jagged peaks jut into the very sky, and they are so chaotically situated that it takes a very experienced pilot to wind his way through this maze. Our pilot confidently steers his craft through the first deep gorges of Karategin.

5

With a sharp gesture the pilot points downwards. We have come out on to the rock-bound river Vakhsh. Here it is not like the broad, smooth, free-flowing river we saw in the Vakhsh Valley. It is a turbulent stream, angrily surging between the steep walls that hem it in, lashing the rocks with its foaming water and sweeping on from rapid to rapid. From somewhere on its side, along the bank of a small tributary, there

runs towards it a well-laid high road which by-passes the small, white town of Obi-Garm, hidden in the depth of the gorge. We look for the sulphur hot springs where there is a sanatorium, but it is hidden from us by the crags. The road runs on the edge of the precipices along the Vakhsh, which suddenly divides into two rivers shooting out of the deep defiles.

At the junction of these two rivers, Obi-Khingou and Surkhob, which form the Vakhsh, we catch a glimpse of Komsomolabad, the administrative centre of this district. Beyond it the road also divides into two. One—the Stalin Great Pamir Highway—runs to Horog; the other runs along the river Surkhob and branches out in the northern gorges in the Garm Region.

How picturesque are the small kishlaks down below! Each nestles on a tiny patch on the river terrace, or at the mouth of a steep-banked river amidst closely planted apricot, apple and mulberry trees; and clinging to the crag overhanging the village runs a pipe line which carries water to the irrigation canals. Patches of field, connected with the village by winding tracks, are scattered over the mountain sides wherever a place could be found for them among the rocks. In the upper reaches of the gorges, in narrow valleys, there are pastures in which cattle graze.

We fly over a small town at the foot of the steep bank of a tributary of the Surkhob, its white houses, shady streets and green orchards laid out on a level terrace between the steep slopes. That is Novabad, the administrative centre of the Garm Region. Beyond it, on the Surkhob itself, there is another small town, Garm, the former centre of the region.

We have now come quite close to the gigantic mountains. Rocky, steep, some split from top to bottom, with sharp, jagged summits, their gigantic rocky heaps separate in sharp ridges and wind downwards in long trains, washed in the deep-cut gorges by rushing rivers which have their birth in the glaciers. The picture is one of primordial beauty.

Such is the Peter the First Range, into the deep gorges of which our seemingly microscopic plane has suddenly darted.

We are approaching North-Western Pamir, the great glacial region. This region lies at heights ranging from four to seven and a half kilometres above sea level.

We are flying at a height of six thousand metres. It is becoming hard to breathe, but many of the mountains around us tower ever higher—black crags with tooth-like pinnacles shooting up from their névé slopes. These peaked summits spread to the right and left of us as we proceed in mid-air between the two ridges, which are dazzling bright in the sun. The white mountain glides seem to be polished; the sun has converted the close-packed snow on them almost into mirrors.

But what a sky there is above us! It is not light blue, or dark blue, but almost black if you just glance at it; but when you gaze at it for a while you realize that it is indeed blue, but of an unusual tint, violet if anything. This is because the air is rarefied here and the ultra-violet rays are little absorbed by the atmosphere.

We have crossed one ridge, and the crags which just now had almost touched our aeroplane suddenly drop straight down, forming a chasm a kilometre deep, and then drop another kilometre or two kilometres deep. After recovering from the shock, straining our eyes, we see far down below in the seeming bottomless gorge a river winding like a fine silver thread. But we barely catch sight of it and just manage to glance at a vulture soaring with outstretched wings when the other side of the gorge suddenly rises in front of us like a wall—huge granite crags and glaciers hanging almost from the top of the ridge; its wild, jagged, icy teeth positively seem to snap at the plane as it skims over it under the skilful guidance of the pilot.

Another ridge. Our aeroplane is floating in an unexplored world. Beneath us lies a glacial region of vast dimensions.

A gigantic peak towers ahead of us. We are flying at a height of six thousand metres, but this peak dazzling white rises another fifteen hundred metres higher. This is Peak Stalin, the highest in the Soviet Union, discovered by a Soviet expedition. Could human beings have been in this almost cosmic world? Yes. In 1933 mountaineer E. Abolakov, the only one of the group, reached its very summit. And on its summit an automatic meteorological station was put up!

6

The range we have just crossed is called the Academy of Sciences Range. We have entered the Gorno-Badakhshan Autonomous Region. A whole phalanx of immensely high peaks crowds around us, but we push forward and suddenly turn abruptly to the south over a gigantic glacial river stretching from north to south. This is the Fedchenko Glacier.

The Fedchenko Glacier is the biggest glacier in the middle latitudes of the world. Unexplored glaciers like it can be found only on the crests of the Kuen-Lun and the Himalayas.

In the region of the Fedchenko Glacier basin the mountain chains are covered with névé and ice. They are scarcely broken up; they tower in solid masses, having no deep, precipitous gorges. Here frost reigns all the year round, even in the sunny days of July. The snow, thawed by the sun, freezes at once and acquires a fine granular consistency. That is why it is so bright and sparkling. Truly a lifeless world!

We look down to the foot of Communist Academy Peak, whose gigantic, névé-covered sides slope down to the edge of the Fedchenko Glacier and just as our plane veers to the south-west we discern down below, on the very edge of the glacier, a building that looks like a hangar, on the roof of which a tiny red flag is fluttering. Yes, Soviet people have brought life to this place and are living here, in inter-planetary space as it were. They do not, however, feel lonely; they have daily communication with the Soviet people, with the entire country. They have a radio-station, and we can see its slender mast. This is a glacial-hydro-meteorologicol observatory, the highest in the world. Much has to be told about it, but our plane has already left it far behind, has flashed over the Kashal-Ayak ice-fall with its sheer half-a-kilometre drop, marking the boundary of the Fedchenko Glacier basin, and a new landscape, unlike the one we have passed, spreads out before us.

Our aeroplane cuts obliquely across a jagged and greatly dismembered chain, the sides of which are deeply furrowed by the tributaries of a river that flows deep down in the gorge out of a glacier that branches off from the Kashal-Ayak. This is the Geographical Society

Glacier, and the river is called the Vanch. We are flying over the Vanch Range. We shall now have to cross row after row of other gigantic, rugged ranges also divided by rivers running through their equally deep gorges—the Yazgulem, Rushan and Shugnan ranges. Their six-kilometre crests tower 3,000 to 3,500 metres above the narrow river valleys!

We leave Eastern Pamir far on our left. Its landscape can be truly called a relic of the hoary past. The glaciers have melted, the moraine has gone, it has slipped to the bottom of the trough-like valleys, called glacial troughs, along which there are always to be found rows of hills and hummocks, the remains of ancient moraine piles. These valleys provide pasture for large flocks and herds. There is a state farm there for breeding yaks, and the collective farmers in the Murgab District of this region have achieved great success in developing livestock farming. Hundreds of automobiles speed along the excellent high road which crosses the mountains from the Ferghana Valley—from Andizhan and the Kirghizian town of Osh—to Horog.

We are flying over Western Pamir. Here the landscape is no longer of the relic type, and the glaciers here are of a type different from those in North-Western Pamir. They are relatively small, but clinging to the mountain sides at tremendous heights, they slope very steeply far down into deep, inaccessible gorges. This is the region of the most furrowed, the most rugged, the steepest and, in some cases, perpendicular mountains.

We are flying to Horog crossing range after range, and gorge after gorge. On the south we can already discern the Panj, the large frontier river, the opposite bank of which is as rocky and as steep as ours.

Suddenly and unexpectedly we see a broad road cut out of the granite wall. It seems to overhang a bottomless precipice at a height of several hundred metres above a turbulent river. An automobile speeds along the road, then another, and a third. This is still the Stalin Great Pamir Highway. How the road reached here we cannot tell from the aeroplane; but here it is, and motor-cars are running along it.

We see the narrow valley of the Panj and patches of small, well-cultivated fields. We enter a gorge and descend to a lower altitude. We

are now on the ordinary air track followed by passenger planes which choose an easier route.

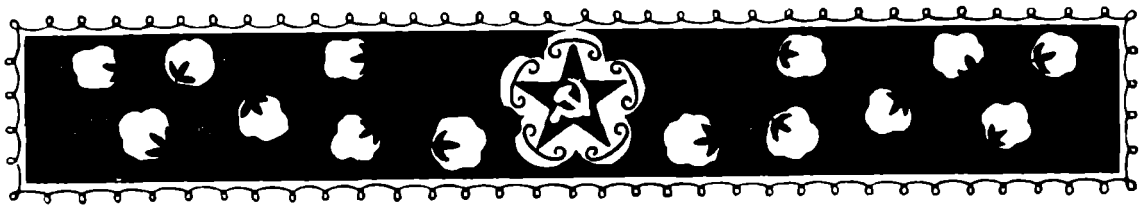
The Hindu Kush and the other ranges in Afghanistan, Pakistan and India, which we have only just seen, now disappear from view. Two walls, two steep mountain sides—Soviet and Afghan—the two sides of the same gorge, hem us in; the roar of the engines is magnified tenfold by the hollow echo. Ahead in the gorge at the junction of the Gunt and Shakh Dara, both of which flow into the Panj, we see a small, but very beautiful town. That is Horog, the capital of Gorno-Badakhshan. It is a modern, well-laid-out, cultured city with gardens and tree-lined streets, and is fully supplied with electricity and other public utilities.

The pilot is preparing to land. We fly low on a level with mulberry, apricot and apple trees and tall graceful poplars. It is warm again in the cabin. Horog is situated at a height of 2,200 metres above sea level and is in the same latitude as the Mediterranean.

By mid-day tomorrow we shall be back in Leninabad, and then not bothering to save time we shall repeat our journey this time on land, by land roads, through the country almost the entire territory of which consists of mountains; of the 142,000 square kilometres constituting the area of Tajikistan only 10,000 square kilometres are flat.

And all that we caught distant glimpses of from the aeroplane we shall see at close hand and inspect thoroughly, in order to tell the reader in detail how under Soviet rule Eastern Bukhara, the former barbarous domain of the Emir of Bukhara steeped in ignorance and poverty, was transformed into the present flourishing Tajik Soviet Socialist Republic.

RED FLAG OVER "BLANK SPACES"



1

FOR ITS exploration, for its scientific achievements, and for its extensive system of scientific institutions, Tajikistan is indebted solely to Russian science, and above all to Soviet science.

Russian travellers reached these valleys and mountains long, long ago, when they were still regarded as inaccessible. They entered the domains of the Emirs of Bukhara and of the highland feudal Shahs who, interested only in collecting taxes and dues, knew nothing about their country. Step by step, ignoring dangers and interdictions, these travellers gleaned crumbs of scientific knowledge about the then forbidden land of the Tajiks.

Here, in the guise of scientists, came no few foreigners, but they had different aims, which we shall deal with later.

Before the October Revolution the Tajik people, oppressed by bloodthirsty and ignorant rulers, could not have their own scientific institutions or scientifically educated specialists. Although a talented people who in all times produced philosophers and poets, artists and naturally-gifted architects, the Tajik people could not study science under the rule of the Emirs.

Even medicine was in the hands of witches and wizards who "healed" the sick solely by means of incantations and prayers.

The veteran Tajik writer Sadriddin Aini, describing his childhood in his *Memoirs*, initiates us into the mysteries of the "course of learning" that was taught in the Madrasahs, or theological seminaries, in

Bukhara. In these seminaries eight years were spent in mastering Arabic grammar, but pupils learned only a few easy Arabic sentences and the correct pronunciation of Arabic words when reading, for the lessons consisted entirely of disputes about words. It took nineteen years to go through the whole "course of learning," but, writes Aini, "in the Madrasahs in Bukhara no theological subjects were taught, they taught only metaphysical rhetoric and medieval scholastics." If anybody in Bukhara did succeed in becoming an educated man, "such people were as rare as fruit-trees in the salt desert . . . they acquired their knowledge thanks to their exceptional talents and persevering assiduity."

Progressive people like Aini and Ahmad Donish (Kalla) were individual exceptions, and it must be added that Ahmad Donish was able to develop his learning because he had occasion to visit Moscow and St. Petersburg, where he gained access to Russian culture.

The outstanding individuals like Ahmad Donish and the well-known Tajik poets did not, however, conduct their activities in the sphere of the practical sciences.

Only under Soviet rule were the Tajik people able to train scientific workers educated in materialist science.

2

If some approximate knowledge was available about Eastern Bukhara, almost nothing was known about Pamir until the middle of the nineteenth century.

The very map of Pamir was an enigma. It consisted mostly of blank spaces with the inscription "unexplored region," and in many parts it was incorrectly drawn on the basis of "information obtained from the inhabitants." What were the mountains like, where did they stretch to, how did they interlace? What rivers were there, and where did they flow? Were the "blank spaces" inhabited? Nobody knew.

Even Eastern Bukhara—the domains of Karategin and Darvaz—and also the mountains of Kukhistan, right close to Bukhara, was hidden from explorers by a veil of mystery. Access to these places was closed to scientific workers by the barbarous Emirs.

In ancient times this country was part of an extensive and highly cultured state, and yet it was almost impossible to obtain information, any information, however slight, about the life of the peoples of ancient Sogdiana and Bactria, or about the numerous other peoples, civilized and barbarous, who at different times had inhabited the territory of what is now Tajikistan.

All the exact knowledge we now possess about these peoples was acquired only recently in Soviet times, after the Tajik people had studied their history, and when every branch of science became accessible to and respected by everybody in the republic.

The first description of Pamir that has come down to us is that written in the seventh century by the Buddhist monk Hsüan Tsang, who related that "in the land of Po-Mi-Lo" snow falls even in the summer, the wind blows day and night, the soil is impregnated with salt; "on entering this wilderness you no longer see any human habitation," and in the very highest place there is the deep "Dragons' Lake" of dark-green water surrounded by reeds and abounding in game. There are indications in Hsüan Tsang's description that already before the fifth century the trade route from China to Badakhshan and India ran through Pamir.

In the thirteenth century the Venetian Marco Polo crossed South-Eastern Pamir during his long travels. His book contains a chapter entitled "Here Is Described the Region of Balasian" in which a little but true and valuable information is given about Badakhshan.

When did Russians begin to visit Bukhara?

The Arabian geographical literature of the ninth and tenth centuries already contains considerable information about the commercial intercourse that existed between Bukhara and the Volga region.

The chronicles tell us of the presence in Nizhni Novgorod of numerous Bukhara and Khiva merchants as far back as the middle of the fourteenth century, and of a journey through Central Asia made in 1464 by a Russian embassy, which was received in Herat by the descendant of Timur, Abu-Said.

In the middle of the sixteenth century direct relations were established between Moscow and Bukhara, which remained constant ever

after. From 1583 to 1600 eight Bukhara embassies came to Moscow "with gifts and friendly obeisances requesting freedom to travel and protection." These were, to express it in modern language, missions of "goodwill" accompanying the Bukhara merchants, who in Russia were called Taziks, i.e., Tajiks.

Moscow, in its turn, sent embassies to Bukhara.

In 1578 Ivan Grozny sent Yuri Matyunin. In 1589 tsar Fyodor Johannovich sent Taishev. In 1620 tsar Mikhail Fyodorovich sent Ivan Khokhlov, who travelled *via* the Caspian Sea to Mangyshlak, and then crossed the steppe to Urgench. Later ambassador Anisim Gribov twice travelled *via* the Caspian Sea. In 1669 Pazukhin, and in 1675 Vasili Daudov, went as ambassadors to Bukhara.

All these embassies returned safely, bearing rich gifts from Bukhara.

At the end of the eighteenth century Bekchurin and Burnashev, as official of the Mining Department, went to Bukhara, and in 1820 a mission headed by Negri was sent there.

If we are to speak of Russian travellers to Bukhara for scientific purposes, then the first who deserve mention are the mining engineers Kovalevsky and Gengros, who left in 1839, but returned without reaching Bukhara. Next come the members of the expedition headed by K. Butenev (a "specialist in the mining sciences"); Fyodor Bogoslovsky, a young mining engineer from the Urals; Kozlov, a mine foreman; Yakovlev, a topographer; Khanykov, a geographer; Alexander Leman, a naturalist, and Vitkevich.

This expedition, making the difficult journey from the Urals, arrived in Bukhara, in August 1841.

The members of the expedition later told about the commercial intercourse that existed between Russia and Bukhara at that time. In the bazaar in Bukhara there were on sale "real Damask" daggers made from Russian steel, cones of Russian sugar, turban cloths of Russian calico, and many other Russian wares.

Khanykov and Vitkevich noted in their diaries the extraordinary diligence of the Tajik people, their skill in fruit and vegetable growing, their non-irrigated wheat fields, rice, cotton and tobacco plantations, silkworm breeding, and their intricate irrigation system.

Butenev's expedition left Bukhara for Samarkand. Some of its members fell sick with yellow fever, but the expedition pushed on to Penjikent and from there following the mountain rivers Zeravshan and Fan Darya reached Yagnob.

After surmounting incredible difficulties and dangers, Butenev's expedition returned to Russia with splendid scientific results. In addition to coal they discovered in different places deposits of gold, silver, copper, lead, graphite, rock salt, turquoise, saltpetre, sulphur, iron ore, blue vitriol and marble. They brought back a very large botanical collection. Later Khanykov published his well-known book *A Description of the Khanate of Bukhara*, which was translated into many languages. To this day that book is regarded as the most reliable source of information about old Bukhara.

Butenev's expedition was the first Russian scientific expedition to penetrate this unknown land of mountains.

Thirty years later the famous explorer of Central Asia A. Fedchenko, and his wife, the brave Russian woman explorer Olga Fedchenko, entered this country from another side—from Tashkent. After passing through the Kokand Khanate they, on July 19, 1871, for the first time in the history of scientific exploration, saw from the crest of the Alai Range the next gigantic range, the outpost of Pamir. Fedchenko named it the Zaalai Range. The honour of discovering the highest peak in this range, now called Peak Lenin, also belongs to Fedchenko.

Fedchenko was the first to dispel the fantastic ideas about the structure of the Pamir ranges which had reigned until that time. He drew the most complete, and for his time correct, "Map of the Kokand Khanate and of the Upper Reaches of the Amu Darya," which served as the basis of all succeeding surveys made by other geographers. The Fedchenkos collected several thousand specimens of the fauna and flora of the regions of the Zeravshan and the mountains bordering the Ferghana Valley, collected ethnographical material of first-class importance, and made meteorological, physical and geological surveys of the places they traversed. They belonged to the galaxy of great Russian nineteenth century explorers of Central Asia.

In 1876 and in subsequent years several Russian scientific explorers visited Pamir, and an expedition headed by the entomologist V. Oshanin operated in Karategin, further west. To V. Oshanin belongs the honour of making the first scientific survey of the vast mountain chain known as the Peter the First Range and of the group of huge glaciers, the largest of which he named the Fedchenko Glacier. The expedition, however, was unable to climb up to this glacier. In 1908 the topographer N. Kosinenko climbed to the tongue of the glacier, but he did not succeed in going over the whole of it.

After that first individual travellers and later scores of scientific explorers visited the mountains of Tajikistan. General naturalist expeditions were followed by specialized ones. The most interesting of these were the exploration of the regions of the Hissar Range, Karategin and Darvaz made by the botanist V. Lipsky in 1896-99; the geological work conducted by G. Romanovsky and at the beginning of the twentieth century by D. Nalivkin, now a member of the Academy of Sciences; the geographical explorations by Grum-Grzhimailo and later by N. Korzhenevsky; the ichthyological researches by L. Berg; the botanical researches by Regel, V. Komarov and S. Korzhinsky; and the language and ethnographical studies made by A. Bobrinsky, A. Semyonov, I. Zarubin and M. Andreyev.

All this work, however, was done without any system by individual enthusiasts who set out on their difficult journeys at their own risk.

At the time of the October Revolution the level of knowledge of a large part of Pamir and of Eastern Bukhara was as low as it had been in the nineteenth century. Concerning many of the remote districts and those difficult of access there was no knowledge at all.

The exploration of the loftiest heights of Central and Middle Asia, however, is of enormous scientific and practical interest.

The formation of the relief of these titanic mountain massifs is one of the most interesting geological events which changed the face of our planet. From the different and diverse deformations of the earth's crust at tremendous heights it is possible to picture the multitude of processes that have taken place in it. In other parts of our planet these processes have remained hidden from man under the earth's surface. Here,

however, nature has revealed many of her secrets to the observer's gaze and has made it possible to draw many theoretical conclusions concerning the geological structure of the entire globe. From the practical point of view the exploration of the mountains of Central Asia could, and in Soviet times did, lead to the discovery of most valuable outcrops of minerals, and above all of metals.

That is why the mountains situated in the territory of what is now Tajikistan, and which until only recently had been difficult of access and little explored, so strongly attracted the attention of Soviet scientists, who were striving to solve the theoretical problems facing the whole of world science and to find new repositories of industrial raw materials for our socialist industry.

3

The whole of Soviet Land started on the work of reorganizing the entire national economy on socialist lines. The First Five-Year Plan could be fulfilled effectively only on the basis of complete and exact scientific knowledge.

As regards Tajikistan even the geographical map was spotted with numerous "blank spaces." As for the map of the natural resources of the republic, and particularly of Pamir, it was almost entirely a "blank space." In the scientific conceptions concerning these resources utter confusion reigned. Every department of science was dominated by shaky hypotheses and untested and often false theories.

In the investigation of the mineral resources of the country Soviet science encountered theories advanced by foreigners for the purpose of retarding the industrial development of our country.

One of those "theories" denied that Central Asia had any prospect of becoming a mining region for Russia. The "theory" was that, because of its geological characteristics, Central Asia did not "generate" metals, that it was not "metallogenetic."

That "theory" was advanced in the interests of West-European monopolist capital by the French geologist Delauney. In making this unfavourable analysis and noting only "slight intensity in the ore-

formation process in the whole of Central Asia," Delauney and other West-European geologists (for example, the German geologists who wrote about the Tien Shan) tried by their "scientific utterances" to discourage research by Russian scientists. Behind the curtain of these false theories, certain foreign concession holders, before the revolution, hurriedly mined gold in Pamir and Darvaz and smuggled it out of the country.

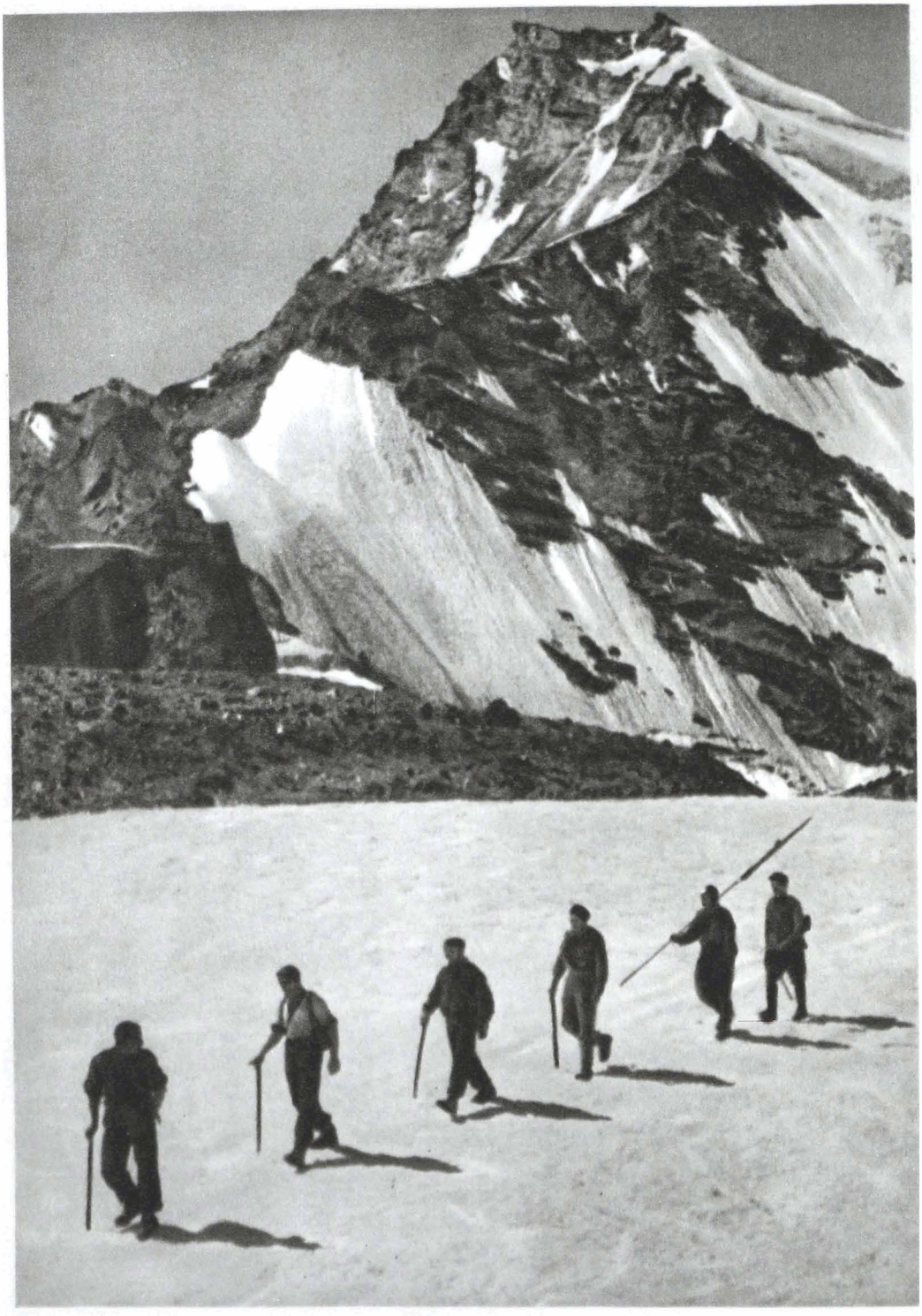
Now, after the immense investigations made by Soviet geologists and geochemists during the past twenty years, every schoolboy knows that Central Asia possesses tremendous deposits of ores and other minerals, and that it is one of the most important industrial bases of the U.S.S.R.

And hundreds of explorers who have investigated other resources proved long ago that Tajikistan in particular possesses inexhaustible sources of water power, a wonderfully fertile soil and the richest pastures, and a climate favourable for the cultivation of numerous industrial crops that were unknown here in the past.

The pioneers of Soviet exploration in Pamir were the geographer N. Korzhenevsky and the geologist D. Nalivkin. They had done exploration work in Pamir before the October Revolution, and they made several journeys there in the years 1924-27. But the first big planned Soviet expedition, which set itself a whole complex of tasks, was the Pamir Expedition of 1928, which included several German scientists.

The scientific work of this expedition, in which twenty-six Soviet specialists participated, was directed by the geologist and geochemist D. Shcherbakov. The main task of the expedition was to draw a geographical map and make a general survey of the unexplored regions of North-Western Pamir. The expedition was excellently equipped and supplied with pack radio sets, phototheodolites, cinema cameras, geophysical and meteorological equipment, excellent mountaineering equipment, concentrated foods, medicaments and everything that was needed for the zoological, botanical and ethnographical researches and for other subordinate researches.

For the cartographical work the photogrammetric method was employed. This work was directed by I. Dorofeyev.



A geological expedition in the Pamir Mountains

Gorno-Badakhshan Autonomous Region. Horog. Lenin Street

Part of the ancient city wall and remains of tower in Leninabad

Stalinabad. The Government House

The Meeting Hall at the Academy of Sciences of the Tajik S.S.R.

For the purpose of taking astronomical bearings the expedition included astronomers; for rendering medical assistance it included doctors; and for high-mountain climbing it included a group of experienced mountaineers headed by O. Schmidt.

The expedition started out from the town of Osh. It entered the high-mountain desert of Markansu, rounded Lake Kara Kul at a height of four thousand metres, penetrated the vast unexplored region of North-Western Pamir, and breaking up into small groups, set to work.

For the first time in history the upper reaches of the rivers Tanymas, Yazgulem and Vanch were explored and mapped. At the place where the Sel-Tau Range was supposed to be the expedition found a huge glacier which turned out to be the Fedchenko Glacier, of which only the first thirty kilometres of the northern end had been previously roughly surveyed by Kosinenko. Many other large, formerly unknown, glaciers, mountain ranges and passes were discovered and crossed. Enormous peaks, some rising to a height of 6,700 metres, were discovered, photographed, measured and plotted on the map. It was found that through these glaciers and ranges communication was possible between Western Tajikistan and Eastern Pamir, between Eastern Pamir and the middle course of the Panj.

The large-scale relief map made by the expedition is regarded to this day as the most detailed map of the glacier regions of Central Asia. The expedition also made extremely valuable astronomical, geological, mineralogical, botanical, zoological and linguistic researches. It explored numerous lakes and made about forty ascents to heights ranging from five to seven thousand metres.

4

The mystery of the big "blank space" was dispelled; the results of the expedition's work proved to be very considerable. They gave rise to a number of other extremely important problems, the solution of which was undertaken by expeditions organized in the next three years. It was also necessary to explore the districts of North and Western Tajikistan which adjoin Pamir. These districts were explored under the

scientific direction of D. Shcherbakov by several detachments of the 1930 Tajik Expedition. Difficult routes in Southern Pamir were explored by geological parties under the direction of G. Yudin, S. Klunnikov, A. Khabakov, E. Andreyev and other young scientific specialists. At the same time soil-scientists, irrigation specialists, medical men and agronomists—the first plant-breeders—carried on research work in Southern Tajikistan. One of the major tasks in these districts was to study methods of combating malaria and other local diseases. This work was directed by the celebrated parasitologist E. Pavlovsky, now a member of the Academy of Sciences and a Stalin Prize winner.

The discoveries made by expeditions and individual explorers, and the potentialities of the general development of Tajikistan as a whole which they revealed, alarmed the capitalists of the imperialist countries, above all the British capitalists.

It was not surprising!

For the first time the theory that the mountains of Central Asia were "poor" in minerals was challenged by Soviet scientists. The discovery of most valuable deposits and therefore the development of the mining industry in Soviet Tajikistan became possible. Collective and state farms arose in the republic and increased in number. The first cotton-ginning mills were set up. It was found possible to grow fine-staple cotton in the scorching deserts, and to revive those deserts by means of irrigation systems. Soviet people not only threw doubt on the inaccessibility of the mountains, but proceeded to build roads in them, for the time being in Central Tajikistan. In the towns of the republic the first special colleges, institutes, experimental stations and other scientific research institutions began to be opened. Hundreds and thousands of peasants joined the Communist Party, or the Young Communist League, entered the collective farms, went to work in industrial enterprises, went to school to learn, all prompted by the desire to master and develop the natural wealth of their country.

And all this meant that the might of Soviet Tajikistan was beginning to grow at a rapid rate.

Wishing to frustrate the work of building socialism in the East the rapacious imperialists, and the British imperialists in particular, re-

membered the Basmachi whom the Red Army and the Tajik people had routed and driven from the Soviet Union as far back as 1926; they hastened to organize and arm new bands and sent them to raid the frontier of Soviet Tajikistan.

The struggle against these new Basmach raiders lasted through the whole of 1930 and half of 1931. Among the objects of attack by these raiders were the Soviet scientific expeditions. Cut off in the wild mountains and valleys from inhabited centres, having no communication with anybody, and relying only on their own strength, the peaceful geographers, ethnographers, geologists, engineers and agronomists, displayed exceptional courage. They fought the Basmachi under the most difficult conditions, but did not interrupt their scientific-research activities for a single day.

Thanks to the heroism of the Red Army and of the "red staff"* detachments of collective farmers, in 1931 Tajikistan was utterly cleared of Basmachi, and this attempt of the imperialists to frustrate the peaceful development of the country also failed.

The enemy did not, of course, succeed in annihilating our scientific workers, or in forcibly closing to Soviet science the path to exact and fruitful knowledge to be used to promote the building of socialism. Precisely in that period the Soviet scientific explorers made a number of most important discoveries. All that, which only recently the Soviet geologists and geochemists had regarded as probabilities, assumptions, was found to be well-grounded and was confirmed by facts. The deposits of numerous minerals found in Pamir, in North and Central Tajikistan, were the first indisputable proof of the falsity of the old pernicious theory about the "poverty" of the Tajikistan mountains. The Soviet explorers collected considerable material for the creation of a new, Soviet geological and geochemical theory, which opened wide prospects for the development of the mining industry in Tajikistan. But the work conducted in this period was only a first reconnaissance in this vast sphere of scientific knowledge, to be followed by a wide offensive.

* So called because, having no other weapons, these peasants fought the Basmachi with staves, pitchforks, mattocks, and so forth.—*Tr.*

5

By decision of the government the Presidium of the Academy of Sciences of the U.S.S.R. organized the 1932 Tajikistan Complex Expedition, which was far larger and more comprehensive than any expedition of its kind organized hitherto. For the purpose of directing its operations a scientific council was set up with Academician A. Fersman as chairman. Among the directors of the expedition were some of the most outstanding scientists of our country—D. Shcherbakov, D. Nalivkin, E. Pavlovsky, B. Fedchenko, B. Nasledov, A. Markovsky, and others.

In all, seven hundred persons took part in this expedition; of these, two hundred and ninety-seven were scientific workers. The expedition was divided into seventy-two detachments covering the most diverse branches of science—geology, geochemistry, meteorology, hydro-energetics, botany, zoology, ethnography, seismology, parasitology, and others. All over Tajikistan numerous supply bases were organized beforehand and stocks of food for man and beast were accumulated. About a thousand horses, purchased in the northern districts of Kirghizia, were driven a thousand kilometres and more to the expedition's starting-out bases in Stalinabad and Osh. Many of the items of equipment were not then manufactured in the Soviet Union, and in order to supply the expedition with them a number of small, hitherto non-existent industries were created. The expedition was supplied with radio stations, aircraft and automobiles. A column of six, Soviet-manufactured, one-and-a-half-ton trucks was to undertake a bold and perilous journey over the old Great Pamir cart track—the highest passes of which had not been mapped and on which there were no bridges crossing the turbulent rivers—in order to reach the eastern valleys of Pamir where operations were to be conducted.

In May this vast expedition started out from Stalinabad and Osh into the mountains along the various routes that had been mapped out.

Some of the regions of Central Tajikistan had already been covered by the first motor roads and passenger air lines. This enabled many of

the detachments to conduct their operations at a much faster rate than had been possible before.

The Communist Party and Young Communist League organizations had prepared the whole population of Tajikistan for the arrival of the expedition. Everywhere the peasants, and especially the collective farmers, rendered the scientific workers every assistance, often of a very practical kind, and it was primarily due to this that the scientific work was everywhere successful.

Places which only a few years before had not been explored by anyone and had not been marked on the map became centres of lively activity. The legendary mountain passes which had been regarded as inaccessible, the glaciers and mighty ice-falls like Kashal-Ayak, became beaten tracks for the scientists.

In six months—from the opening to the closing of the passes—the expedition travelled a hundred thousand kilometres (counting all the routes as one) and explored a hundred thousand square kilometres of Tajikistan territory.

Not all the "blank spaces" had been filled in by preceding expeditions. There were still plenty of places which had never before been reached by explorers. In North-Western Pamir there was the intricate maze formed by the Zaalai Range (with Peak Lenin, 7,127 metres high)*, the Peter the First Range (with a number of peaks seven kilometres high), the meridional Academy of Sciences Range, and the Darvaz Range branching from it. The converging point of this maze, where the Academy of Sciences and the Peter the First Ranges meet, turned out to be a gigantic peak of extraordinary height. In 1928 this peak was taken from a distance to be Peak Darvaz. It was now discovered that the two groups of the 1928 expedition had mistakenly taken two different peaks for Peak Darvaz, and that the height of the latter was only 6,615 metres. Nobody before had succeeded in approaching close to the peak which crowned the heights of the Pamirs.

* In the literature on Tajikistan different figures are given for the same physico-geographical objects. Throughout this book we quote the figures given in the sources which we regard as the most authentic—*P. L.*

Measurements showed that it was 7,495 metres high. This highest peak in the Soviet Union was named Peak Stalin.

The results of all the work performed by the Tajikistan Complex Expedition were tremendous: the flora and fauna of the republic were studied; the fodder and fuel resources and the water-power potentialities of the rivers were calculated; the prospects of cultivating the non-irrigated lands were ascertained, and considerable ethnographic material was collected. The most important results were obtained in the sphere of geology and geochemistry. Investigating the mountain-formation processes, the scientists established the fact that the rise of many of the Pamir mountains was due to volc nic action, which also accounted for the numerous ore deposits found by the expedition. These brilliant discoveries served as the basis for the elaboration, development and proof of a new, Soviet theory, which opened exceptionally wide prospects of exploiting the ore-bearing nature of the mountains not only of Tajikistan, but of the whole of Central Asia. In particular, all the practical possibilities of the industrial development of Tajikistan, of transforming it into a country of extensive and highly-developed industry, were ascertained.

The enormous theoretical and practical knowledge obtained in 1932 required deeper and detailed study. For this purpose the Tajik base of the Academy of Sciences of the U.S.S.R. was set up that year in Stalinabad, the most important departments being the geological and botanical. In the organization of the botanical department great assistance was rendered by Academician V. Komarov.

It was decided to organize an expedition on the same scale in the following year.

In the spring of 1933 a conference was held at the Academy of Sciences of the U.S.S.R. in Leningrad to discuss the productive forces of Tajikistan. This conference was attended by several hundred persons—outstanding scientists, scientific-research workers, members of the 1932 expedition, and also members of the forthcoming 1933 expedition.

On the basis of the scientific material obtained by the explorers and discussed at the conference the Soviet government determined the direction of all future economic activity in Tajikistan.

That year the Second Five-Year Plan came into operation all over the Soviet Union. In Tajikistan, as everywhere else, the plan was firmly based on the latest data of Soviet science.

6

In addition to all their other work, the expeditions of 1932 and 1933 carried out another unusual, but interesting task. Those expeditions coincided with what was called the Second International Arctic Year (2IAY) in which the Soviet Union participated. Besides the study of the Arctic, the program of 2IAY included the investigation of the arctic "blank spaces" far away from the arctic countries. There are such spaces in the tropics and in the middle latitudes—the high-mountain ice regions. In the Soviet Union the glaciers of the Pamirs, the Tien Shan, the Caucasus, the Alai and the Northern Urals come within this category.

2IAY expeditions were sent to all these regions.

The 1932 Tajikistan Complex Expedition also received 2IAY assignments. Detachments of the expedition made special observations in glaciology, hydrology and meteorology in Pamir and established a number of high-mountain meteorological stations at various points. The major assignment, however, was the erection of the highest glacio-hydro-meteorological observatory in the world on the Fedchenko Glacier, 4,300 metres above sea level.

Why was this observatory needed?

The glaciers situated on the edge of the Pamir highlands between the deserts of Turkmenia and the dry, sharply-continental high-mountain region are amazing for their tremendous development and diversity of types. As D. Shcherbakov has stated, "The regions that feed the Fedchenko ice-fields . . . strongly impress one by their immensity, which makes them comparable with the névé fields in the continental ice-fields in the arctic countries."

Billions of tons of ice are situated at enormous heights towering over the whole of Tajikistan. The Fedchenko Glacier alone (counting its average width at three kilometres, length 79 kilometres and thickness half a kilometre) consists of 118 cubic kilometres of ice. If we take

all the other glaciers in this basin, the total volume will be not less than 500 cubic kilometres.

This gigantic mass of ice is situated at a height of a thousand metres above all the surrounding valleys of the high-mountain region.

It is, indeed, the ice-roof of Central Asia!

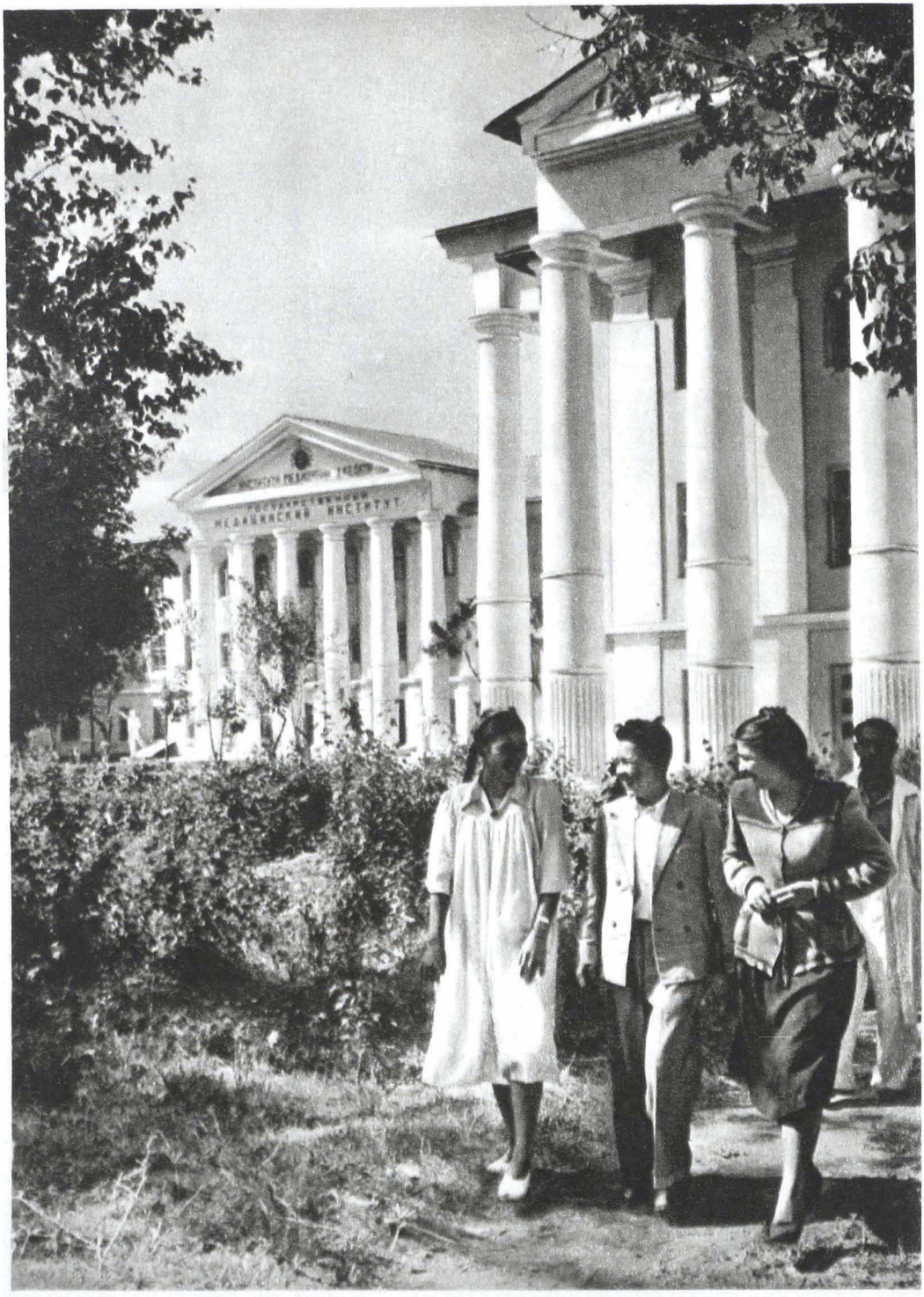
Nearly the whole of the river Vakhsh, the rivers Vanch, Yazgulem, Bartang and others, which wholly or partly have their sources in this glacial basin, flow into the Amu Darya (to be exact, the Panj, as the upper reaches of that great Asian river are called).

In other words, all the upper tributaries of the Amu Darya situated in Soviet territory begin in Pamir, from its glaciers. The Amu Darya is fed by their waters, depends upon the thawing of these vast masses of ice. The significance of the Amu Darya for the entire national economy of the Central Asian republics is self-evident. Needless to say, a detailed exploration of its sources was most essential. The basin of the Fedchenko Glacier is a vast reservoir of water power. It would have been impossible to exploit this power, to build hydro-electric stations and irrigation systems, or to develop the growing of cotton and other crops, if the behaviour of this reservoir had not been first ascertained.

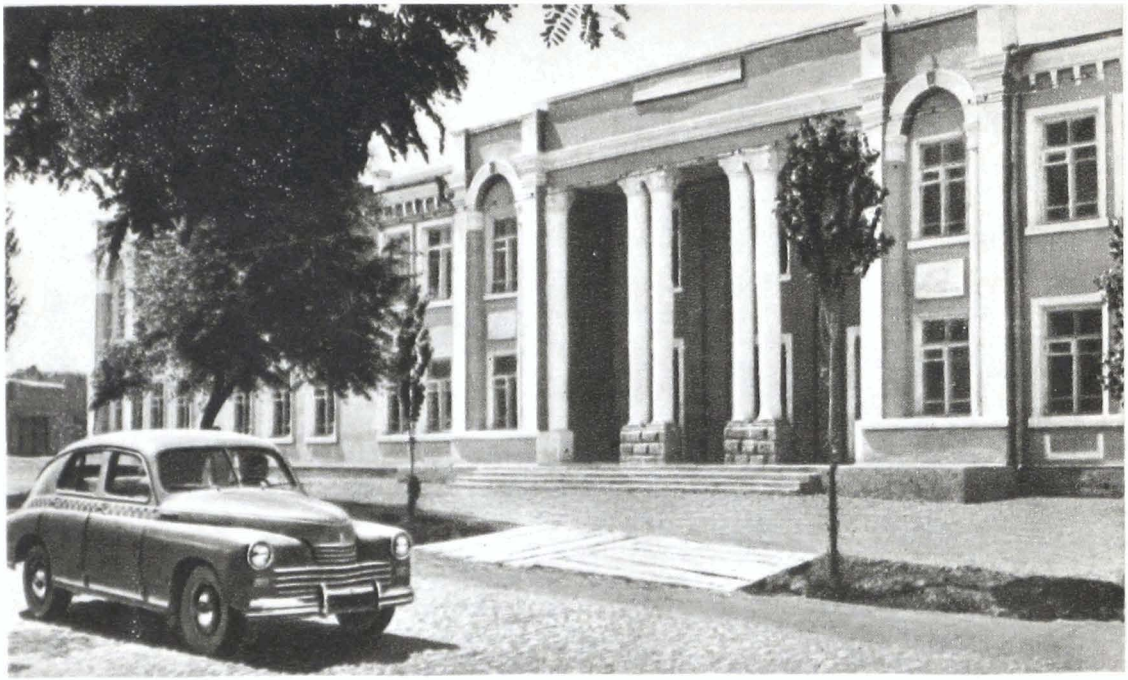
Moreover, the glacial region of Pamir is the "weather kitchen" of the whole of Central Asia. Here, on the glaciers, clouds form, wind, snow-storms and rain arise. It is from here that the "weather waves" spread in different directions. If early frost kills the cotton crops in the hot valleys of Central Asia, if the rivers cease to flow and their beds dry up, if fierce gales tear the leaves from the mulberry-trees, if the turbid forces called forth by heavy rain flood the wheat fields with a thick, yellow ooze, if a thousand other misfortunes of this kind occur, who is to blame for it first of all?

The ice on the mountain heights which fights the sun.

The phenomena which occur in the atmosphere of Pamir are amazing and enigmatic. In the East Pamir desert of Markansu sand-storms suddenly arise like those in the Sahara. On the river Muuk-Su dust-storms suddenly arise and stir up solid walls of dust which rise to a kilometre or two over the valley. Hurricanes on the glaciers developing a terrific speed of forty metres per second raise vast masses of fine dry snow and



The Abu Ali ibn Sina (Avicenna) State Medical Institute



A new secondary school in Leninabad

The Leninabad Silk Combine. The Second Silk-Weaving Mill

pile up snow-drifts as high as the Kremlin towers. Avalanches several kilometres wide slip from the sides of Peak Stalin and other peaks. From the Altyn-Mazar Alps come "squalls" that give the impression that the sky has collapsed. From the Sauksai and other canyons come blasts of wind so powerful that it seems as though no power on earth can withstand them.

The entire region is the centre of exceptional climatic phenomena which are in eternal conflict with one another.

In this wild welter of the elements man appears to be so puny that it seems to be impossible even to attempt to reach this place.

Soviet men, however, have always been distinguished for their fearlessness and ability to cope with any element. And the decision was daring: to settle people in this severe region, cold and lifeless like the face of the moon, people who would not fear the rarefied atmosphere, the fierce arctic frost, or solitude, who feared nothing and would be ready to sacrifice their lives for every precious point recorded by their instruments.

It was necessary to erect on the Fedchenko Glacier a permanent scientific observatory, no matter what difficulties had to be overcome!

At first the proposal to build such an observatory seemed madness to many people, for they could vividly picture to themselves what awaited the daring builders.

The observatory had to be built at the foot of the gleaming white Communist Academy Peak at a height where barometric pressure drops to 400 mm., almost twice below the ordinary, and where, therefore, a man's pulse beats 120-130 strokes a minute; where in the rarefied atmosphere it is difficult to walk and to breathe. The observatory had to stand unshakeable where hurricane winds press against every square metre with a force that rises to as much as 360 kilograms, which is more than man can bear.

The observatory was built in Tashkent with the view to transporting it in parts by rail to Osh and from there by pack-animals and porters to the glacier, 490 kilometres away. Consequently, no part was to weigh more than 32 kilograms. On the glacier itself every nail, every rod, every bolt had to be carried tens of kilometres. The bare observatory

building weighed four tons, and the instruments and stocks of fuel and food for a year weighed another 96 tons. The entire baggage had, therefore, to be divided into over three thousand packs.

The observatory had to be assembled at a height of 4,300 metres, on a glacier, under inhuman conditions. It had to be firmly built, convenient, supplied with electric light, equipped with most complicated instruments and meet all human wants. The quarters for the staff had to be warm (for the temperature here drops to as low as 45°C below zero) and comfortable, for the staffs would be changed only once a year.

Soviet people built such an observatory.

During the whole of the summer and autumn of 1932 caravans moved to the building site, forcing turbulent rivers, crossing gigantic ice cracks, hummocks and formless masses of moraine, undaunted by avalanches, rock-falls, hurricanes, blizzards, biting frost and the scorching sun. The mountaineers cut steps in the ice and built bridges across the cracks, some a half a kilometre deep.

A flat crag overlooking the edge of the glacier was chosen for the site. There tents were put up, and booths to house the meteorological instruments: thermographs, hydrographs, evaporators, vanes, rain gauges, barographs, actinometers, snow gauges, heliographs, and nephoscopes.

Alongside the observatory was built. The builders lived on the ice, and the ice moved, thawed, cracked. At night, when the frost contracted the ice masses, the glacier cracked in all directions. The cracks opened instantaneously and unexpectedly, sometimes within the expedition camp. To fall down one of those cracks meant disappearing for ever. At dawn the magnificent sun rose from behind the mountains and its rays, penetrating the frost, thawed the snow. Gigantic avalanches rushed downwards, hissing threateningly, sweeping away everything that lay in their path. Rock-falls broke the mountain silence with a terrific roar. In the day-time melting ice boulders somersaulted and breaking into pieces hurtled into the ice cracks with a melodious sound. The sun scorched hands and faces. To go without yellow spectacles meant certain blindness. The dry wind cracked the skin on lips and cheeks and it peeled off in strips. The men smeared themselves with grease and

vaseline, for they dared not wash with the icy water. There was no hot water, or only enough to make a strictly rationed portion of tea to warm up with twice a day; for fuel was worth its weight in gold, it had to be brought from down below, very far away. These hardships could be borne because of the comradeship, discipline, enthusiasm and cheerfulness that characterized the builders.

By the winter the observatory building was finished. To remain on the glacier longer might have been fatal for the builders. It was decided to postpone further operations until the spring.

The work was resumed in 1933 and continued all through the summer and autumn under the same conditions as described above. Towards the end of November the work in the main was completed, but frightful weather detained the building detachment on the glacier until December 8. On that day on leaving they saluted the Red Flag. Five people remained to winter in the observatory. One of them was a young woman twenty years of age, meteorologist Ludmilla Fyodorovna Sharova.

From that day at this observatory, the highest in the world, there has been a staff of workers, changing every year, keeping watch day and night without interruption for a single hour, and reporting their observations to the whole country by radio. The data they provide is used down below at aerodromes from which aircraft soar into the air, by irrigation mechanics who supply water to the cotton fields, by Michurinists who are growing fruits never before grown in the subtropics, and by engineers engaged in planning the construction of canals.

The people down below are warned of impending floods, avalanches, rain, which determines the ploughing, sowing and harvesting seasons, the force and direction of the wind. At the present time when the Soviet people are engaged in transforming nature on a tremendous scale, we are more than ever convinced of the importance of the Fedchenko Glacier for the whole economy of Central Asia. All the more valuable, therefore, is the work performed by the staff of the Fedchenko Glacial Observatory. In conjunction with this observatory a whole network of new meteorological and hydrological stations, covering the mountain spaces of Tajikistan, are engaged in this difficult and noble meteorological service, conducting diverse observations.

7

The subsequent, equally big, expeditions organized in the years of 1934-37 made a detailed study of the entire geological structure of Tajikistan and discovered numerous phenomena which complicated the original conception of the formation of its mountain systems. It was found that the territory of the republic was divided into five districts, differing considerably from one another as regards conditions and time of their origin, and also as regards structure. These districts are: the mountains of Karamazar and Kukhi-Mugul (Mogol-Tau); Ferghana Tajikistan; Central Tajikistan; South-Western Tajikistan; Pamir and Darvaz. At the present time the problems of the relation between the Pamir Mountains and the Tien Shan are in a new phase of study conducted by the most outstanding geologists and geochemists in our country—D. Nalivkin, D. Shcherbakov, V. Nikolayev, A. Markovsky, and hundreds of other theoreticians and practical workers.

The successes achieved in botanical research were equally striking and important for the development of agriculture and certain branches of industry. It was found that the flora of Tajikistan contained as many as 4,500 species of wild and cultivated plants, about two-thirds of the total known flora of Central Asia as a whole. Many of the species found in Tajikistan have never been met with in other places. The Botanical Department of the Tajikistan base of the Academy of Sciences of the U.S.S.R., working in conjunction with the botanical detachments of the expedition, directed the latter's work in organizing a network of geobotanical centres and studied the problems of fruit-growing, afforestation and park and garden development.

In those and subsequent years scientific-research work in Tajikistan was conducted to an increasing degree at permanent centres. The Tajikistan base of the Academy of Sciences of the U.S.S.R. expanding year after year set up special institutes embracing all branches of the republic's economy. In 1941 the base was transformed into the Tajik Branch of the Academy of Sciences of the U.S.S.R., directed by Academician E. Pavlovsky. A most important event in the cultural life of the whole of the Tajik Republic was the transformation in 1951 of the

branch of the Academy of Sciences of the U.S.S.R. into an independent Academy of Sciences of the Tajik S.S.R. of which E. N. Pavlovsky is an Honorary Member.

The Tajik Branch of the Academy of Sciences of the U.S.S.R. had united six big scientific institutes, three departments, and eleven other scientific-research institutes in Stalinabad and various other districts of the republic. The scientific institutions of the Academy of Sciences of the Tajik S.S.R. increased not only in number, but also in magnitude, all capable of solving independently the multitude of new scientific problems set them by the second post-war five-year plan.

The aim of the intense work that is conducted in these institutions is to promote the building of communism. Before any practical measure is undertaken in Tajikistan it is thoroughly studied and worked out in the scientific institutions of the republic.

New sources of raw materials must be found for the mining plants which are already working in full swing or are in course of construction everywhere! Industry must be supplied with mineral fuel! It is necessary to ascertain whether the vast areas of land irrigated for the first time for cotton-growing will prove to be saline! Experiments must be made in non-irrigated cotton-growing, tree planting and fruit-growing on the dry mountain slopes! Places must be found where the vast flocks and herds can graze in the winter! Local cattle must be crossed with Swiss cattle, and local goats with the Angora breed! Vaccines must be produced; cultivated plants must be protected from insect pests!

All this is done primarily by the institutes of the Academy of Sciences—the geological, chemical, botanical, livestock, zoological and parasitological, soil science, land reclamation and irrigation institutes; the cotton-growing, energetics, and economics departments; the Stalinabad and Pamir Botanical Gardens, the Vakhsh Soil and Land Reclamation Station, the Afforestation Station and other experimental stations.

Long ago new methods were worked out of exploring for minerals connected with magmatic rocks. New detailed geobotanical maps have already been drawn of the territories that are rich in pastures. Many methods have been studied of utilizing mineral fertilizers for cotton to

increase yield. Fruits grow on trees grafted on to the roots of wild species. New breeds of sheep have been raised. In the western valleys ticks, the carriers of disease in domesticated animals, have been almost vanquished. The astronomical observatory has made over 130,000 observations of the variable stars and has published more than 250 scientific works. The Seismological Institute and the Seismic Stations are working out scientific methods of forecasting earthquakes. The Institute of Language and Literature has published dictionaries and has collected a rich stock of folklore. The Institute of History, Archaeology and Ethnography is studying monuments of material culture of world importance and precious ancient manuscripts. The Department of Philosophy is studying problems of communist education.

All this is the result of the services the Academy of Sciences of the Tajik S.S.R. is rendering our socialist Motherland.

Co-operating with the Academy of Sciences are the State University which was opened in 1948, the Pedagogical Institute and other educational institutions, and also the following organizations of practical importance: the Cotton-Growing Research Institute in Kurgan-Tyube; the All-Union Arid Subtropics Research Institute; the State Plant-Breeding Experimental Station; the Medical Institute; the Fruit, Vine and Vegetable Research Institute, and many other scientific and educational institutions.

The geological, archaeological, ethnographical and other expeditions which come to Tajikistan work in close and friendly co-operation with the Tajik Academy.

In Stalinabad there frequently take place scientific congresses, sessions and conferences attended by outstanding scientists from all parts of the Soviet Union.

In the Academy of Sciences and other scientific institutions, and in the higher educational establishments, there is a total of over six hundred scientific workers, of whom about thirty are Doctors of Science and about a hundred and fifty are Masters of Science.

There is now in Tajikistan a large and firmly-established body of Tajik scientific workers. The President of the Academy of Sciences, Sadriddin Aini, Doctor of Philological Sciences, outstanding scientist

and writer, is world famous. Members of the Presidium of the Academy are the poet Mirzo Tursun-Zade and the architect H. Yuldashev. Among the members of the Academy are B. Gafurov, Doctor of Historical Sciences, who by his work *A History of the Tajik People* and other works has made a valuable contribution to our knowledge of the past history of Central Asia; and Sarajon Yusupova, the first woman in Tajikistan to receive the degree of Doctor of Geological-Mineralogical Sciences. Among the Corresponding Members of the Academy are the philosopher A. Bogoutdinov, the biologist G. Aliev, the economist I. Narzikulov, the historian Z. Rajabov, the medical scientist Y. Rakhimov and the writer S. Ulug-Zoda. Many of them—Doctors and Masters of Science—are directors of higher educational and other scientific institutions. Others —chemists, geologists, educationists, biologists and medical scientists —are engaged in important research work in their respective fields. Among the scientists are natives of districts in all parts of Tajikistan. All of them received their education in Soviet schools and colleges, and all of them are working in close co-operation with the Russian scientists who have devoted their scientific knowledge to Tajikistan and have helped many of them in their studies.

The scientific works of the Tajik scientists are published in *The Bulletin* regularly issued by the Academy of Sciences, and in book form.

And that is how, in the void of the mysterious "blank space," the magnificent edifice of Soviet science in Tajikistan was erected.

That is how the miracle was performed!

And this miracle is one of the triumphs achieved by the Lenin-Stalin national policy, which has raised the culture of the free and talented Soviet peoples of the East to an immeasurable height.

Today Tajikistan, with its highly-developed industry and agriculture, with its own, immensely broad scientific base, is stepping into the ranks of the most advanced republics of the U.S.S.R.

The Red Flag is flying triumphantly over the former "blank spaces" of Tajikistan!

THE CITY OF LENIN IN TAJIKISTAN

1

IF A YEAR'S output of the Leninabad Silk Combine could be pictured as one strip it would be long enough to go round the Earth's equator. These mills, the largest textile mills in the republic, annually turn out millions of metres of silk fabric.

The spacious buildings, built of concrete, iron and glass, occupy a wide area on the outskirts of the city, facing collective-farm cotton fields and apricot orchards. The mills consist of a cocoon-winding and a silk-spinning factory, two weaving factories and a dyeing and finishing factory, large machine shops, a foundry, electric and steam power plants, and public utility services. A small town has sprung up in the territory of the mills consisting of scores of dwelling-houses—large two-storey apartment houses, and small, one-family cottages surrounded by gardens, occupied by Stakhanovites. In this town there is a hospital, a night sanatorium and public bath-rooms. There is a fine recreation club, in the theatre of which four-act plays are performed by amateur dramatic groups. There is an open-air cinema theatre, a pioneer camp, a stadium and an open-air dancing ground, where the music is provided by the factory amateur string band and orchestra. In the factories there are shower baths and medical centres. The latter not only provide medical treatment for the sick, but also take preventive measures—for example, pre-treatment of the hands of cocoon-winders who have to work at tubs filled with hot water There are dining-rooms, and a factory for making cool drinks for the workers. The factory yards are asphalted and

lined with trees, and all the open spaces have been converted into gardens with fountains, and into groves of decorative and fruit trees. There is a rest-home for the workers, built by the management. Everything in and around the mills creates for the workers socialist cultural conditions of life and work.

Columns of motor trucks bring to the sorting shop enormous "kanaries," i.e., sacks filled with cocoons. Other trucks take away bales of finished silk fabrics. Before the Great Patriotic War the mills manufactured only three coarse types of silk: tussore, serge and bekasab. Now they turn out as many as thirty types, such as the very fine "crêpe-Tajikiston" and the striped tussore that is sold in large quantities at the stores in Moscow, Leningrad and other cities of the Soviet Union. Lately they have been manufacturing plush in all colours and shades.

These mills were erected in the period of the First Five-Year Plan. Building operations began in 1927, but since the mills were started their output capacity has grown twelvefold, long ago exceeding the originally planned capacity.

The mills are equipped with the most up-to-date machine units, with tens of thousands of looms and spindles, minded by thousands of people. Knack, experience, initiative and a high standard of production are demanded of all those whose deft fingers are busy in the numerous shops.

The workers, technicians and engineers in the various departments are representatives of different nationalities, but most of them are Tajik and Uzbek women—young, with sun-tanned faces, only recently from school or from collective-farm fields. The colourful skull-caps and national gowns they wear give the bright shops they work in a festive appearance.

The Stakhanovites at the mills earn high wages and many of them live in new, well-appointed houses. Stakhanovite Alimov was the first to buy a Pobeda car, but now automobiles and motor cycles are as common among the Stakhanovites as radio sets, gramophones, good furniture and books.

There are numerous other factories and mills in Leninabad which are famous for their highly-skilled workers. The Red Weaver Silk Mills, the oldest in the city, the canning plant, the cotton-ginning mills, the butter factory, the silkworm graine plant, the boot and clothing factories, the winery, the mechanized bakery and other industrial plants erected in the period of Soviet rule have transformed Leninabad into the second largest industrial centre in Tajikistan, next to Stalinabad.

2

Nearly 2,300 years ago, in the year 327 before our era, Alexander the Great reached the eastern border of the ancient state of Sogdiana and built a fortress there. He called it Alexandria Eskhata, which means "the outermost."

It is believed that Alexandria the Outermost was the town formerly known as Khojent; but there are grounds for thinking that Khojent existed on this site, or somewhere in the vicinity, long before the time of Alexander the Great.

Khojent was the first Tajik town in which Soviet rule was introduced in 1917 and became firmly established in 1918.

When the national delimitation of Central Asia was carried through after the October Revolution, Khojent came within the frontier of Uzbekistan. In April 1929, being a town with a predominantly Tajik population, Khojent, together with the whole Khojent Region, was included in the Tajik Republic.

At the historic conference of advanced men and women collective farmers from Tajikistan and Turkmenistan with the leaders of the Party and the Government held in the Kremlin on December 4, 1935, Jura Bobokalonov, the chairman of the Socialism Collective Farm, on behalf of the Khojent collective farmers, requested J. V. Stalin to change the name of the town and give it the name of Lenin.

The town was renamed Leninabad.

At the present time tens of straight, tree-lined streets intersect in all directions the clay-built ant-hill of the old city. The labyrinth of crooked streets, so narrow that two people can scarcely walk abreast, those cor-

ridors between blank walls with nothing to relieve the monotony except tightly shut doors, that labyrinth is rapidly disappearing. In a few years' time it will be entirely swept away as a result of the planned reconstruction the city is now undergoing. The flat-roofed, adobe hovels, the numerous grave-mounds of "saints" (and every feudal ruler tried to get himself included in that category), the dust and mud, are all vestiges of the dying past, which is heartily detested by every Soviet inhabitant of Leninabad.

It is not these adobe ruins that determine the appearance of the present administrative centre of the region.

The new luxuriant orchards belonging to city organizations and the vast, millionaire collective farms envelop the old city on three sides and in many places penetrate its precincts.

Nearly every inhabitant now has a small orchard, vineyard and melon patch in his backyard, watering them with water drawn from recently-dug wells or irrigation ditches.

Already entire districts have lost all semblance of what they were in the past. Shady avenues, attractive shop windows, the striking colours of the new, well-designed houses, the cinema theatres, the lawns and flower beds laid out in every open space, the water running in the concrete irrigation ditches, the radio loud-speakers, the open windows of libraries, schools and colleges, the clicking of type-writers in offices, the book-stalls, the ice-cream and cool-drink fountains at all the street corners, the flower-sellers everywhere in the streets, the restaurants, theatre posters, the swish of the motor tyres of innumerable automobiles, thousands of bicycles darting hither and thither, the bright-coloured silk dresses worn by women and the white tussore suits of men, the bright electric lamps that light up the city at night—such is the scene Leninabad presents today. Arbas, or bullock-carts, are more and more rarely seen in the main streets. Their journey usually ends at the old bazaar, but even there they hinder the traffic of the collective-farm motor trucks.

Adobe is giving place to asphalt and stone—polished marble, rough granite and diabase, tiles, corrugated iron and ornamental, brightly-tinted plaster mouldings.

The ancient mosques are no longer an ornament to the city, now so replete with new porticos, colonnades and snow-white sculptures.

There is only one mosque in the city that deserves attention as a work of art, namely, that at the tomb of the Sheik of Maslakhetdin, now converted into a Museum of Regional Studies. Its really beautiful ornamental mouldings, designed and fashioned by the ancient artist craftsmen, have been restored by the veteran craftsman Shamsidinov, whose father and grandfather were craftsmen before him, and who is teaching the art to his two grown-up sons. This artist worked for three years ornamenting the walls of the Leninabad Silk Combine and is well known to everybody in Leninabad.

The museum contains not only relics of the past in the shape of fragments of ancient pottery and a collection of rude agricultural implements, but also samples of the goods produced today by local industry: silk fabrics, fashionable clothes and foot-wear, machines, canned fruit, and a large assortment of other products of the light and food industries.

There are many good medical institutions in the city: a physical therapy hospital, a malaria station, a night sanatorium for factory workers. There are numerous kindergartens and nurseries. The city has an adequate water-supply. The citizens take pride in the blocks of new dwelling-houses that have been built, and in the new motor-repair works and other plants.

A new central square is being built in the city to be called "Moskva." The recreation park is being enlarged. On the Syr Darya, the embankments of which are being encased in granite, a river stadium will soon be opened. The main streets will be covered with asphalt and electric trams will run along them.

Thus, day after day, the face of the city of Leninabad is changing, the face of the city which on a par with Stalinabad is justly regarded as the training ground of its cadres of industrial workers and of its young Soviet intelligentsia.

3

At the Twelfth Party Congress, held in 1923, J. V. Stalin said: "In addition to schools and language, the Russian proletariat must take all measures to create in the border regions, in the culturally backward republics—and they are not backward because of any fault of their own, but because they were formerly regarded as sources of raw materials—must take all measures to create centres of industry in these republics."

And indeed, the first industrial enterprises, even though small and of small output capacity, appeared in Khojent, as well as in other towns in present-day Tajikistan. In Khojent the "Red Weaver" Silk Mills were erected; in Diushambe a small industrial combine, and in Kurgan-Tyube, Kirovabad, Kulyab, Parkhar and Shaartuz, small cotton-ginning mills were built.

Thus a beginning was made, and in the first year of the First Five-Year Plan period industry in Tajikistan began to develop at a rapid rate. In Khojent a canning plant, a winery and a silk-weaving mill were built. By 1932-33 they were already working in full swing. In the republic there were already three large and several small electric-power stations; two non-ferrous mines, the "KIM" oil-fields, two new cotton-ginning mills, a fruit-processing plant, brick-yards and lime kilns started operations.

Simultaneously national cadres of workers were trained.

An example of how industry developed, how those cadres grew, and what they achieved, is provided by the Leninabad Silk Combine, and by the other industrial enterprises in Leninabad. As regards the whole of Tajikistan, in the last twenty years alone, gross industrial output increased more than 50-fold, and compared with 1928, the number of industrial workers increased 57-fold.

Before the revolution Khojent was a town of handicraftsmen and shopkeepers typical of Turkestan of that time. Today, however, Leninabad, the administrative centre of the Leninabad Region, is a big centre of industry and culture.

Additional surface fertilizing of cotton plants at a collective farm in the Regar District

The Tajik State University

Lyutfi Zakhidova. People's Artiste of the Tajik S.S.R.

The House of Culture at the Malenkov Collective Farm, Leninabad District

The Office of the Zhdanov Collective Farm, Leninabad District

Before the revolution in the area of what is now Tajikistan there were thirteen school-teachers and only ten Russo-native schools, attended by 369 pupils. Of the entire population of the Khanate, one half of one per cent was literate, and those literates were the mullahs and official clerks. Not a single newspaper or book was published.

A town of mosques and mullahs, Khojent, like the other towns in what is now Tajikistan, lived strictly according to the laws of the Shariat. Women in particular dragged out a miserable existence; they were bereft of all human rights.

On December 11, 1926, at the First Inaugural Congress of Soviets of the Tajik A.S.S.R., a declaration proclaiming the emancipation of women was adopted.

Casting off the paranja, detesting their slavery, even running away from home, the women of Khojent, like those all over the republic, boldly went to school, and to work in Soviet offices and factories. Women's schools, medical consulting rooms for mothers and infants, kindergartens and nurseries were opened everywhere. Women joined the Communist Party and the Young Communist League; they became chairmen of local Soviets, school-teachers and judges. The local Registrars' Offices resembled the headquarters of fighting units, for it was here that the despotic adherents to the old marriage customs first met with resistance.

All the reactionaries rose against the new law. Women who cast off the paranja were insulted and beaten; there were many cases of brutal murder. By means of slander and intimidation the reactionaries tried to prevent women from taking an active part in economic and public life.

But the Party, the Young Communist League and the Soviet state authorities came to the aid of the Tajik working women. For those who did not wish to return to domestic oppression hostels were opened in Khojent. Co-operative enterprises, like the knit-goods factory named "Emancipated Woman of the East," and others, were set up, and these proved to be outposts of the new, free, Soviet life. The "Red Weaver" Silk Mills in Khojent were a powerful centre of attraction for women workers.

Many women who started their industrial life at Leninabad enterprises later acquired higher education and now occupy leading posts in Soviet and Party work.

In Leninabad there are scores of schools, a women's pedagogical school, a women teachers' institute, a pedagogical institute, a music school and other educational establishments, attended by young women of Leninabad.

Today nobody is surprised at the fact that in 1943 four hundred and fifty young women voluntarily left Tajikistan for Stalingrad to help restore that city; that Hamro Tairova, a woman engineer, directed the building of many fine houses in Stalinabad, became a member of the government of the republic, and went to India as a representative of the whole Soviet Union at the Inter-Asia Conference; that Munzifa Gafarova, only recently a student at the Leninabad Women Teachers' Institute, became Secretary of the Stalinabad City Committee of the Communist Party; that at nearly sixty years of age Rozia Ozod, daughter of a poor Khojent spinner, became a celebrated poetess.

In 1951 seventy-seven Tajik women were elected members of the Supreme Soviet of the Tajik S.S.R., and nine were elected members of the Supreme Soviet of the U.S.S.R.

Eighty-four thousand girls are attending schools and colleges in the republic; eight thousand five hundred women are teachers. About four thousand women have become Party and Soviet officials and managers of industrial enterprises, public offices and educational institutions. There are hundreds of women doctors, engineers and technicians. Many scores of Tajik women school-teachers, doctors and actresses have been awarded the title of "Merited Worker" in their respective professions. There are women Doctors and Masters of Science, and many are Stalin Prize winners. Four thousand women collective farmers have been awarded Orders and medals for outstanding achievements; of these, forty-five bear the title of Hero of Socialist Labour.

4

The Great Patriotic War was a great test of the Tajik people's love of their socialist motherland.

During the war a cavalry division was formed in Tajikistan and thousands of Tajiks joined it. This division fought in the mountains of Svanetia and in the plains of North Caucasus. By the beginning of 1943 it had already annihilated thousands of fascist invaders and had destroyed over a hundred enemy tanks.

Tajiks fought on all the other fronts during the Patriotic War. Thirty-five Tajik soldiers were awarded the title of Hero of the Soviet Union. For example, Tuichi Erjigitov blocked the embrasure of an enemy machine-gun emplacement with his body. Saidkul Turdyev, a commander of a machine-gun company, stepped into the place of his fallen battalion commander and, in the course of the day, led the battalion in counter-attacks six times. He was killed, but the enemy was checked. A street in Stalinabad, an orphans' home and the Kishlak Boljuan where the hero was born have been named after him.

Fifty thousand Tajiks were awarded war Orders and medals.

During the war the people of Tajikistan worked with boundless enthusiasm. The mining industry in the republic was placed on a war footing and it put out tens of times more metal than before the war. In 1941 the collective farmers in the Leninabad Region raised their cotton yield per hectare 23 per cent. Tajikistan provided an enormous number of horses for the Soviet cavalry. The wives, mothers and sisters of the men who went to the front became mechanics, tractor drivers, electricians, welders and foundry workers. The Tajik people sent gifts to the men at the front: tens of thousands of pairs of felt boots, hundreds of thousands of pairs of woollen socks and stockings, thousands of sheepskin and padded coats, and hundreds of carloads of dried fruit and vegetables, jam, wine, butter and meat.

The people gladly did all in their power to achieve victory.

Sipping green tea in a pavilion in the park that stretches along the bank of the Syr Darya, friends exchange reminiscences of the Great

Patriotic War, and after that they recall episodes in the ancient history of their freedom-loving people who had always fought invaders and oppressors. They recall the revolt led by Mahmud Tarabi in 1238, and the Sarbador revolt in 1365....

In the fourteenth century here, on the bank of the Syr Darya, where a hotel now stands, the poet Kamol of Khojent was born and lived. He wrote "gazelles," or love poems, but those seemingly innocent verses were really protests against tyranny.

Somebody in the tea-house quotes the lines of one of those ancient gazelles:

Kamol is not the servant of Sultans,
What care they for the poor—

And an old, grey-bearded collective farmer, sitting in the corner, follows this up with the lines of another poem by Kamol:

Oh, the proud soul the Sultan does not fear,
Its dread of chains it has forgotten,
Of dungeons it is not afraid—

Other visitors in the tea-house recite the poems of Mayakovsky and Hafis, of Pushkin and Tvardovsky. Others relate the stories of the classical people's poet Mushfiki. The friends discuss the latest Moscow plays; the fulfilment of the production plan at the "KIM" oil fields; the new textile machines installed at the "Red Weaver" Silk Mills; the universities that are being opened in great, free China; the peace conferences in the Eastern countries; Party work at the neighbouring collective farms; the 26-storey buildings that are going up in Moscow, and the orange dye obtained from "tukhmak," a grass that grows in this locality.

The shades of evening fall. The sun has set. The leaden and silvery hue of the river changes to pink, reflecting the colour of the clouds floating over it. But this lasts only an instant; the river turns grey again, as if unable to retain the rosy tint.

The mountains which had only just been splashed with pink and violet are now uniformly grey and have almost merged with the grey background of the eastern sky.

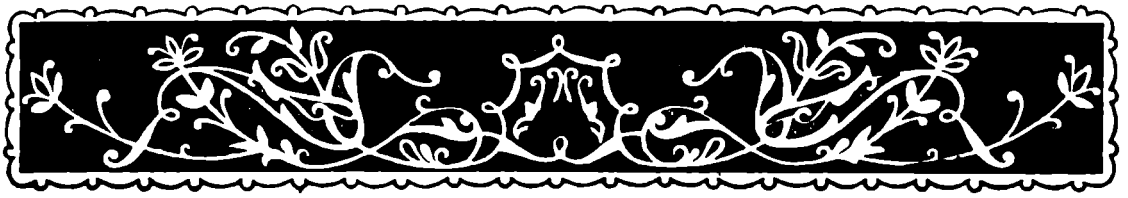
Day has gone, giving place to black, star-spangled night.

The people in the tea-houses, or those leaning over the balustrades of lattice-work pavilions, enjoy the coolness that blows from the river. From a grove of trees comes the whir of a cinema projector. Dancing begins at a near-by dancing ground and the calm strains of a waltz are wafted through the park. From the billiard pavilions comes the click of billiard balls. Sand crunches under the feet of the promenaders in the leafy avenues.

The sound of happy voices continues until late in the night.

The city of Leninabad is resting after the day's work.


MILLIONAIRE
COLLECTIVE FARMS



1

In 1913 the total cotton-crop area in what is now Tajikistan amounted to 26,700 hectares. After the first world war, in the period when the Basmachi ravaged the country, hardly any cotton was sown; in 1922 the cotton-crop area amounted to only 770 hectares!

In 1928 the first collective farms and state farms were organized in Central Asia. In the following year 139 collective farms were organized in Tajikistan. By 1931 the crop area in the republic had grown to over 100,000 hectares. Two collective farms in the Leninabad Region, the "Comintern" and "Socialism," became pioneers in the planting of fine-staple cotton in the U.S.S.R. These collective farms were the first to plant this variety of cotton after the experiments made in South Tajikistan by the Agronomist Artyomov shortly before that.

In recent years Tajikistan became one of the leading republics in the development of cotton growing in the Soviet Union. In 1947 it rose to first place among the cotton-growing republics for yield per hectare, and it holds that place to this day. As regards gross crop, it holds second place. Cotton yield per hectare in Tajikistan is now more than five times what it was in 1932.

Twenty years ago the Soviet Union held fifth place among the cotton-growing countries for gross cotton output. Ten years ago the gross cotton crop in Tajikistan was almost as large as that of Turkey, and five times as large as that of Iran. Outpacing long-established cotton-

growing countries like India and Pakistan, where the cotton-crop area is five times as large as ours, the Soviet Union now holds second place in the world for gross cotton output. In the achievements of this the collective farmers of Tajikistan undoubtedly played a considerable part. The Soviet cotton-growers obtain yields per hectare larger than in any other cotton-growing country in the world.

In Tajikistan there are many collective farms which harvest forty and more centners of high-grade cotton per hectare. This is due to the general development of the country during the past years. At the present time all the cotton fields of the republic are planted exclusively with high-grade, Soviet-bred seed, and nearly half of the cotton-crop area is planted with fine-staple varieties. In some collective farms the yield per hectare of medium-staple cotton is astonishing—sixty and seventy centners, and in some places even more. The Tajik collective farmers have not only become advanced cotton-growers; they play an active part in public affairs. They have learnt the art of state administration, and together with the whole of the Soviet people they are consciously and steadily leading their flourishing republic to communism.

2

In 1939 a hundred and sixty-five thousand Uzbek and Tajik collective farmers of the Ferghana Valley, in forty-five days, cut a canal through the entire length of the arid steppe that slopes down to the Syr Darya. That canal was named the Stalin Great Ferghana Canal. According to former standards, the mere planning of such an operation was calculated to take five years. The canal irrigates about seventy thousand hectares of waterless steppe. Its main artery runs for two hundred and seventy kilometres parallel with the mighty river (which, however, is almost useless for irrigation purposes) and by the will of the Soviet people flows into numerous sluices to provide water for the land lying at a lower level. The entire territory between the canal and the Syr Darya was formerly a lifeless desert, but after 1940 it became a rich oasis, spreading on both sides of the border between Uzbekistan and Tajikistan. There hundreds of new collective farms sprang up.

The canal runs for about a hundred kilometres through the northern part of Tajikistan, and on the land it irrigates there is quite a number of millionaire collective farms, that is, collective farms whose incomes run into millions of rubles per year.

Together with the river Khoja-Bakirgan, the arms at the extreme end of the gigantic canal, its water considerably diminished, irrigate the land of the millionaire collective farms in the Leninabad District. Those farms bear the name of Stalin and Voroshilov, and they are famous throughout the Tajik Republic.

The lands of those collective farms stretch for nearly thirty kilometres around the southern part of Leninabad.

Together with the land of the "Pravda," "Bolshevik," "Socialism" and other collective farms, it comprises a green strip of an average width of ten kilometres.

We shall describe the Stalin and Voroshilov Collective Farms in order to show what can be achieved by people engaged in socialist labour, by people who have faith in their cause and love it, who are well organized and guided by energetic Communists able to dream of great things and make their dreams come true.

The area now occupied by these collective farms was once the site of the Gozion, Ok-Aryk, Unzhi and other kishlaks, each consisting of a score or two of wretched adobe hovels, and also clay-built, but rich houses of the local beys and ishans.

In 1929 on the land of the kishlak Gozion the first collective farm in Tajikistan was formed. It was called "Yangi-yul" ("New Path"); it consisted of twenty-nine families. Soon after quite a number of small collective farms sprang up around it.

In the following year collective farms were organized in the kishlaks Ok-Aryk and Unzhi. Later, a number of small collective farms united and formed the Stalin Collective Farm. Others formed the Molotov Collective Farm, and others again formed the Voroshilov Collective Farm.

That is how the new, collective-farm, way of life began to be built around Leninabad.

Recently, when those collective farms were already millionaires, a further amalgamation took place: the Molotov and Voroshilov Collective Farms united to form one huge collective farm.

At the Stalin and Voroshilov Collective Farms every family has its own house, barns, a piggery, a fruit-drying shed and other farm buildings. In the barns there are tons of produce received in return for work performed in the collective-farm fields: sacks of rice, wheat, almonds, raisins and dried apricots; piles of melons, water-melons and apples; meat, wine, sugar, jars of jam, etc., etc.

Every family has its own melon patch, vineyard and orchard; it has cows, sheep, goats and numerous poultry. In one year alone, the members of the Stalin Collective Farm received as part of their income from the farm seven hundred sheep and goats.

The adobe huts are almost a thing of the past. Most of the collective farmers live in well-appointed houses with many separate rooms with large windows. The houses are set in shady gardens planted with fruit-trees, through which cool irrigation ditches run. In front of every house there is a flower bed and a pond. The rooms are carpeted and furnished with city furniture, radio sets and gramophones. Electric stoves, kettles and flat-irons are in common use. Abundance fills every home. The wardrobes and clothes chests are crammed with velvet, atlas and silk clothing. In the niches in the walls atlas bedquilts are piled right up to the ceiling, and there is enough crockery to serve a meal for the entire population of the kishlak at one sitting.

When the farmers go visiting neighbouring collective farms they ride on magnificently harnessed horses, or in finely upholstered automobiles. As is the custom, every visitor brings his host a gift—a gown, a skull-cap, a girdle, or a silk dress-length for the hostess.

If one of the families has a celebration—a marriage, the receipt of new honours, the graduation of one of the children from college—all the members of the collective farm and friends in neighbouring farms and in the city are invited. And there will be enough *plov* (rice and mutton), wine, raisins and fresh fruit for all. There will certainly be music all the evening, and among the visitors there will certainly be some artist friends who will entertain the company. And the visitors

will enjoy the feast sitting on the carpeted floor, leaning on piles of silk cushions.

In both collective farms there are cinema theatres and hotels. The Stalin Collective Farm has two large central recreation clubs and seventeen field brigade clubs. It has a House of Culture, in which there are numerous recreation rooms, a theatre, an agronomic laboratory and a tea-room.

The old recreation club at the Voroshilov Collective Farm no longer satisfies requirements. In the middle of the farm's fields and orchards rises the dry and bare Kui-Arbob Hill with a flat top of about three hectares. The farmers decided to build on this hill a Palace of Culture. They assigned seven million rubles for the purpose and they invited the Stalinabad architect Hikmat Yuldashev to design the building. On this elevation, amidst the green fields and orchards, a beautiful three-storey building is being erected and will stand like a lighthouse of collective-farm culture. In 1952, the first storey of this building was already built. The central part will be a theatre with a balcony, gallery and side boxes, having a seating capacity of seven hundred. The foyer, restaurant, cloak-room and dancing hall will be decorated with mural mouldings and paintings, pictures and carpets. The central part will be flanked on both sides, like the wings of an enormous bird, by side buildings, on the second storey of which there will be open galleries with beautiful colonnades. These wings will house the reading hall, the Party study hall, rooms for amateur art circles, a tea-room, agrotechnical and zootechnical cabinets, the library, the laboratory, the collective-farm offices and the local radio-broadcasting station. In front of the Palace of Culture, in a large flower bed ornamented with a fountain, busts of Lenin and Stalin will be mounted on marble pedestals. Granite, marble, gypsum and semi-precious minerals will be used in the building and decoration of the Palace. The interior is to be decorated in the Oriental style, and the best people's masters in the arts of mural painting, wood-carving, inlaying, etc., have been invited to do the work.

In the grounds around the Palace a new, planned village will be built.

At the Stalin Collective Farm over a hundred and fifty beautiful, well-appointed houses were erected in recent years. A considerable amount of new building has been carried out also at the Voroshilov Collective Farm. In 1951 the management assigned five million rubles for the erection of a large maternity home, a water conduit system and dwellings. The management now has a Building Department, which has a staff of thirteen building specialists: an architect, two engineers, technicians, planning experts and draughtsmen.

There are Building Departments also at the Lenin and the Bolshevik Collective Farms, and at other advanced, united collective farms in the region.

At the Voroshilov and Stalin Collective Farms there are numerous day nurseries and kindergartens, scores of elementary schools and several secondary schools.

A collective-farm intelligentsia has sprung up. Some of the children of collective farmers are now doctors, and scores are school-teachers, agronomists and technicians.

Many of the young people are studying at the Pedagogical and Agricultural Institutes and at the Agricultural School. In the winter the collective farms organize regular study courses for brigade and team leaders. The teachers at these schools and courses, sons and daughters of the collective farmers who have graduated from colleges in Leninabad, are provided with excellent living quarters and are well paid by the collective farms.

The hospital at the Stalin Collective Farm is under the direction of an elderly Russian woman doctor who has become a member of the collective farm. She speaks the Tajik language fluently and is highly esteemed by her fellow-members of the farm. The medical centres at both collective farms have a service of ambulance cars.

These collective farms have their own flour mills, oil presses, silkworm and cotton-drying sheds, machine shops, shops, storehouses and fleets of motor cars, and garages. In 1951 the Voroshilov Collective Farm had a fleet of seventeen motor trucks and three passenger cars. Among the members of the farm there were three privately-owned Pobeda cars, three Moskvich cars, thirty-two motor cycles and a thou-

sand bicycles. At the Stalin Collective Farm there were five privately-owned motor cars, thirty motor cycles and over a thousand bicycles. The collectively-owned fleet of cars was about as large as at the Voroshilov Farm.

In September 1952 Urun Hojayev, the Chairman of the Voroshilov Collective Farm, proudly reported that the number of privately-owned Pobedas in his collective farm was no longer three, but sixty-one; Moskviches, not three but two hundred; the number of privately-owned motor cycles had risen to seventy, and the number of bicycles had increased severalfold. The number of privately-owned cars in the Stalin Collective Farm also increased, and in the same month, in 1952, amounted to one hundred and fifty cars of latest types.

The broadcasting stations at these collective farms transmit through thousands of loud-speakers the programs of other stations, and twice a day they broadcast the latest news about progress of the work of field brigades and teams, report outstanding achievements by individual members of the farms and draw attention to defects noted in the fields.

In 1952 the members of the Stalin Collective Farm subscribed for 1,300 copies of newspapers. The majority of the members are regular readers of magazines and books. At the farm there are three central libraries, and each of the thirty-two brigades has its own little library. At the Voroshilov Collective Farm there is one central library and twenty-three brigade libraries, having fifteen thousand books.

Both farms have telephone exchanges, which connect them with the city, and with all their sectors, field-camps and services. There are telephones in many of the houses of the farm members.

Of course, both farms have electric-power stations (the Stalin Farm even has two), and both farms receive additional power from the Farkhad Hydro-Electric Station. The farms have a water conduit system, public baths, retail stores, tailor's workshops and scores of other services of various kinds.

At the farms' distant mountain pastures—Shokadam, Kushmulla, Tutlek and others, settlements have sprung up, at which there are

recreation clubs, cinemas, veterinary centres, zootechnical laboratories and radio stations.

In 1946 the Stalin Collective Farm published in pamphlet form its own five-year plan. One of the items of that plan was to double the crop yield per hectare compared with that in the last year of the war. That pledge was fulfilled in less than three years. When drawing up their next five-year plan the members were far bolder in their calculations, knowing that in 1953-55 they would have far wider possibilities than in the preceding years.

Since 1942 this collective farm has held first place for crop yield per hectare. In 1948 it harvested 37 centners per hectare of fine-staple cotton and 47 centners per hectare of medium-staple. The yields were equally high in the following years.

How many households are there at the Stalin and Voroshilov Collective Farms? What is the area of their land? How many heads of livestock have they? What harvests and incomes did they have in 1950 and 1951?

Here we must draw the reader's attention to a few figures.

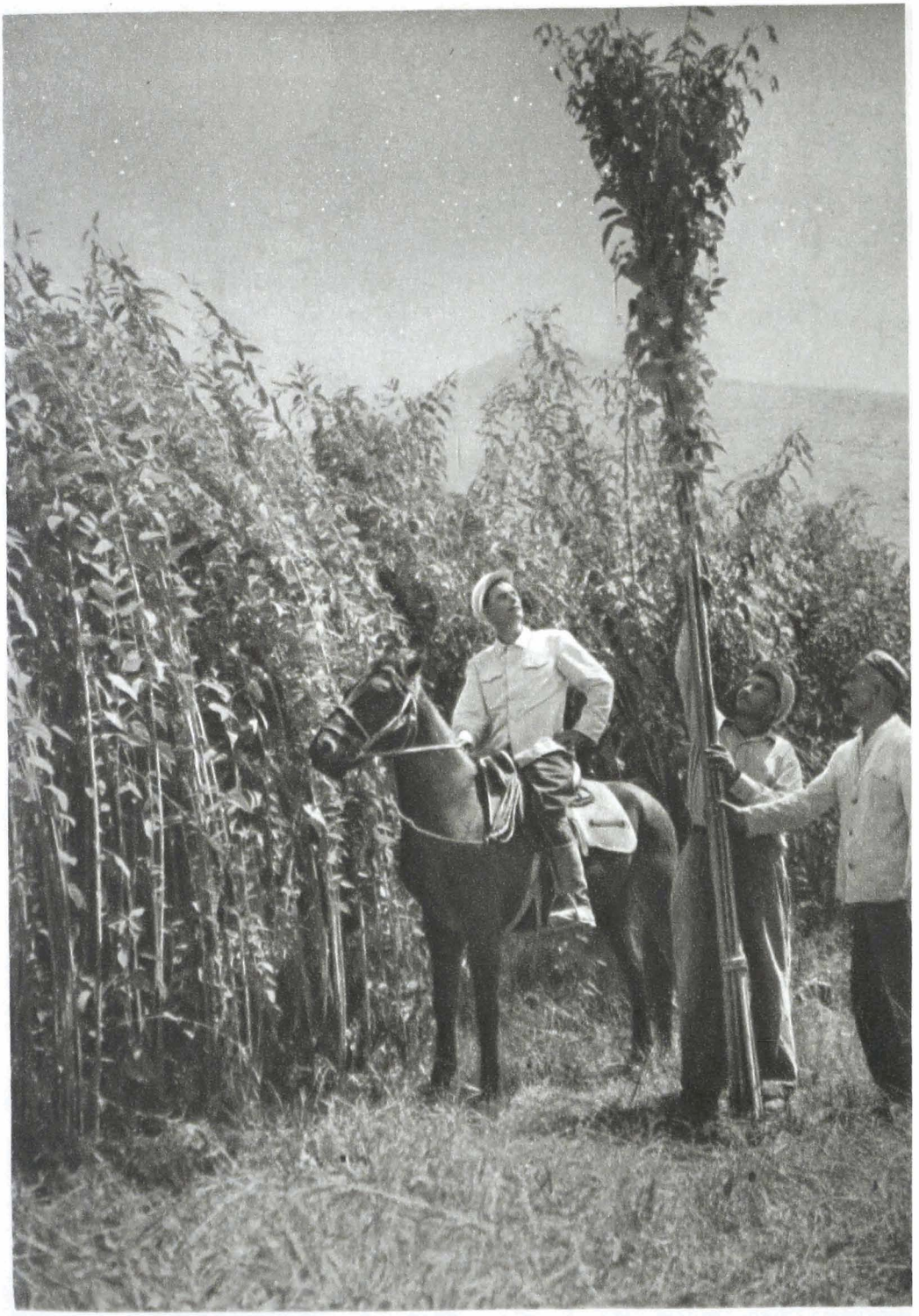
The two collective farms have a total of over two thousand five hundred households, making a population of nearly ten thousand.

The tillage area of the Stalin Collective Farm amounts to 4,428 hectares, of which 1,300 hectares are being developed in the semi-desert zone. The Voroshilov Collective Farm has a tillage area of about 6,000 hectares. In addition, the state, every year, allows the farm to use as much as 20,000 hectares of summer pasture. The Stalin Collective Farm receives a summer pasture area slightly less than this.

Of the total tillage area at the Stalin Farm, 660 hectares are planted with cotton; orchards take up 90 hectares.

At the Voroshilov Farm in 1951 the cotton area amounted to 700 hectares, cereals 700 hectares, orchards and vineyards about 300 hectares, vegetables 12 hectares, perennial grasses 150 hectares. Non-irrigated crops took up 618 hectares.

Each of the two collective farms has several livestock farms. The Stalin Collective Farm has 500 horses, 760 head of cattle, 11,140 sheep and goats, 58 camels, 58 asses, numerous poultry and 98 beehives.



No. 2 Seed-Growing State Farm. A test cutting of jute before the general reaping. Height of stalk 5.5 metres

Day nursery at a collective farm in the Rokhati District

Testing room at a collective farm

The Voroshilov Collective Farm has 650 horses, 643 head of cattle, 5,000 sheep and goats, 60 camels, 75 asses and also numerous poultry and many hives.

The cotton yield per hectare in 1950 was as follows: The Stalin Collective Farm harvested on a large area 40 centners per hectare, and the Voroshilov Collective Farm harvested 41 centners per hectare.

Both collective farms harvested big crops of wheat, rice, apricots, grapes, potatoes and other crops, laid in large stocks of hay, and delivered to the state large quantities of wool, meat, milk, eggs and over eighty tons of cocoons. Of the latter they obtained an average of fifty-two kilograms per box of silkworm eggs. From their orchards and melon grounds they obtained large quantities of pomegranates, peaches, plums, figs, pears, apples, melons and water-melons, and the first crop of lemons, the cultivation of which was begun in Tajikistan only a few years ago.

The most efficient field brigades and teams in both collective farms harvest as much as 60 to 90 centners of cotton per hectare. Compare this with the 7 to 8 centners per hectare which, at one time, was regarded as the limit in the old kishlaks of Gozion and Ok-Aryk.

In 1949 the Stalin Collective Farm had a money income of over 14,000,000 rubles, of which it assigned nearly 2,000,000 rubles to its development fund. In the past three years it deposited over 17,000,000 rubles in the Agricultural Bank. The financial figures for the Voroshilov Collective Farm were about the same.

In 1950 the money income of the Voroshilov Collective Farm amounted to 22,000,000 rubles and that of the Stalin Collective Farm to 20,000,000 rubles. In 1951 the money income of each of the two farms showed a further increase of about 1,500,000 rubles.

The share of the income per workday unit* at the Voroshilov Collective Farm in 1950 amounted to the following: grain, 3 kilograms; dried fruit, 800 grams; grapes, 350 grams; meat, 100 grams;

* The annual net income in money and in kind of a collective farm is shared out among the members according to the amount of work put in, measured in terms of workday units.—*Tr.*

money, 30 rubles. The figures for the Stalin Collective Farm were about the same.

In 1949 at the Stalin Collective Farm field-team leader Karim Mahkamov, Hero of Socialist Labour, had 650 workday units to his account. His share of the income in that year amounted to 12,225 rubles, 2,990 kilograms of wheat, 650 kilograms of rice and a large quantity of fruit and vegetables. Mamad Rahim Isabayev, an ordinary member of that farm, had 559 workday units to his account that year and received 11,826 rubles, 2,571 kilograms of wheat, 559 kilograms of rice, and, of course, large quantities of fruit and vegetables. The incomes of Rahmat Shukurov and of many other members of the collective farm were about the same. Each of them needed several motor trucks to carry all he received to his barn. In 1950 the money income alone of the family of field-team leader Mahmud Sarkor Mahkamov amounted to 50,000 rubles!

There are members of the Stalin and Voroshilov Collective Farms who are living in such plenty that they do not take all the income they are entitled to. "Where can we put it all?"—they say.

In conformity with the new Fifth Five-Year Plan, the Voroshilov Collective Farm intends to raise in the near future its annual cotton deliveries to the state to not less than 3,600 tons, to obtain an increase of 8-9 thousand head of cattle, to bring the milk output to 400,000 litres, to obtain a clip of wool and goat hair of 50 to 60 tons, to harvest 300 tons of fruit and grapes and 100 tons of various cereals, and to deliver to the state 60,000-70,000 kilograms of cocoons.

The money incomes of the farm are to be raised to 30-40 million rubles per annum, and the annual assignments to the development fund are to be raised to 6,000,000 rubles.

The prospects before the Stalin Collective Farm are about the same.

The number of collective farms in Tajikistan as rich as the Stalin and Voroshilov Collective Farms is by no means small. In the Leninabad Region the small collective farms were united in nineteen big ones, and all are now millionaire farms. The total number of millionaire collective farms in Tajikistan is over three hundred! In 1950, the total net

money income of all the collective farms in Tajikistan was 600,000,000 rubles above that of 1949. In addition to the contract price for cotton deliveries, the state pays the collective farms extra bonuses for deliveries over and above the stipulated amount. In 1950, these bonuses alone amounted to about 700,000,000 rubles.

3

On a special table in the club at the Stalin Collective Farm lies a large album in rich, gold-embroidered covers. The first page of the album bears the following inscription in artistic lettering: "December 4, 1935—the Golden Day of the Tajik people."

These words remind the cotton-growers of Tajikistan of the day when their representatives together with representatives of the Turkmenian collective farmers were invited to a conference in Moscow with the leaders of the Party and the Government.

It was a long, friendly conversation rather than a formal conference, and it lasted eight hours. After the collective farmers had told the conference about the successes they had achieved Stalin said:

"It looks as if you are going to make good with cotton-growing. That is evident from all that we have heard here. Your collective farms are developing, the will to work is there, we shall supply you with machines, you will receive fertilizers and all the help you need. Comrade Molotov, the Chairman of the Council of People's Commissars, has already told you that. And so, you are going to make good with cotton-growing and a prosperous life is before you.

"But there is one thing, comrades, that is more valuable than cotton. I mean friendship among the peoples of our country. The present conference, what you have said, and what you have done, show that the friendship among the peoples of our great country is growing ever stronger. That is very important and splendid, comrades."

Stalin then spoke of the brutal policy which had been pursued by the tsarist government and of the new, Communist policy proclaimed by great Lenin—a policy of friendship, of fraternity among the peoples of our country, and in conclusion he said:

"Friendship among the peoples of the U.S.S.R. is a great and important gain; for as long as that friendship exists the peoples of our country will be free and invincible. We need not fear anybody, either internal or external enemies, as long as that friendship exists and flourishes. You can be quite sure about that, comrades."

The whole world knows how brilliantly those words were confirmed. And everybody knows how brilliant has been the success of cotton-growing in Tajikistan.

4

About five years ago a general meeting of the members of the Stalin Collective Farm was called. At this meeting the collective farmers said that there were few public gardens in the territory of the farm. The meeting decided to lay out not a mere garden, but a large recreation park. A site was chosen on the border of the farm, a strip of land in the desert zone, stretching to the foot of Ruhak Hill and the haunt of snakes and scorpions. Through this strip the members of the farm cut a new arm of the irrigation canal at the foot of the hill. The land was broken up and tilled with the aid of tractors. The collective-farm architects and builders set to work on the plans. The agronomist tested samples of the soil, accompanied by gardeners he went to the city to buy seed and obtain advice. Meanwhile, the draughtsmen and topographers were busy in the office.

The project was quickly planned, and on a scale on which only Communists are capable of working.

Today, a clay wall, one and a half kilometres long, separates the hill from the recreation park. At the foot of the wall runs a deep canal lined with plane-trees.

On one side of the wall the dry, parched desert-land slopes upwards to the ridge of the hill, bestrewn with pebbles, burning hot from the sun, and dotted here and there with dull clumps of wormwood.

On the other side stretches a luxuriant park covering twenty-two hectares of land that formerly had been as dry and dreary as the land on the hillside. In this park there are long lines of rose-bushes bearing

Girl pupils and teacher at a collective-farm secondary school

Ashura Nasyrova. People's Artiste of the Tajik S.S.R.

Young Michurinists at a children's technical station

large crimson, yellow and white roses; apple-trees, their branches borne down by the weight of their fruit; ripe pomegranates waiting for someone to taste their refreshing, sourish juice. There are neat flower beds alive with all the varieties of flowers to be found in Central Asia. The intoxicating odour of oleasters pervades the cool air; lower down there are green tunnels formed by grape-vines growing on arched supports.

A motor road runs through this magnificent park and comes to an end at a glade in the midst of a mulberry grove in front of a building of perfect architectural form, its trellis-work terraces giving it the appearance of airy lightness. It is built against the wall that separates this magnificent, fragrant world from the scorched, lifeless steppe. Over the entrance is the sign: "Collective-Farm Rest Home."

Our minds turn to the world stretching into the distance, to the green gardens and roofs of Leninabad, to the Syr Darya, to the lofty ridge of Kukhi-Mugul, past which run the roads to Moscow where the Kremlin stars shine for the millions of Soviet people who are able to dream and make their dreams come true.

THROUGH NORTHERN TAJIKISTAN

1

THE TAJIKS have always been diligent and skilled plant-breeders.

Apricots, grapes and mulberries were grown in ancient Sogdiana. From here the cultivation of apricots spread throughout the world. The Sogdians traded in almonds and walnuts with other countries. We know from historical records that have come down to us that the art of cultivating grapes was first carried into China from Zeravshan 128 years before the present era. The wines of Sogdiana were famous. In the gorges of the Varzob, in Darvaz and in other mountain districts there are thickets of wild grape-vine growing under conditions that are severe for it and forms of which are now being studied by botanists and Michurin plant-breeders.

The ancient art of wine-making passed into history together with Sogdiana, but the varieties of dessert grapes produced by the Tajiks have spread over the entire Orient and are the pride of Central Asia.

The past fame of the wine-growers and fruit-growers is reviving in our Soviet times. Fruit-growing in Tajikistan is entering a new period of efflorescence. At the present time Tajikistan provides our country with nearly half of its supplies of dried fruit.

And now, in order to acquaint the reader with the republic's fruit-growing industry, and also with other branches of its national economy, we shall make a journey through Northern Tajikistan.

No matter where we arrive in the valleys of this region, we shall always find that cotton holds first place. Cotton determines the life of the collective farms. Most of the work of the farmers is concentrated on cotton. And not only in the valleys. Even the grain-growing collective farms have begun to grow cotton on the unirrigated mountain slopes, and this non-irrigated cotton supplements the harvest of the region. To grow cotton is regarded as a matter of honour in the republic.

The Leninabad Region is famous for its industry (particularly mining) and for its livestock and grain-growing collective farms. At present, however, we shall devote our attention mainly to fruit and vine-growing, for in these branches the Leninabad Region has reached a stage of development not yet reached by the other regions of the republic. Of the sixteen thousand hectares of orchard and eight thousand hectares of vineyard in Tajikistan two-thirds are situated in the Leninabad Region. And of the orchard area, a major part is taken up by apricots.

The city street through which we have been riding brings us on to the country high road. We have left the Stalin and Voroshilov Collective Farms far behind.

In the spring the Leninabad valley looks like a river covered with pink foam. Nowhere else in Central Asia are the valleys so well protected from cold winds by the mountains as this bounteous valley is; and the dry, warm climate of the valley is extremely favourable for the cultivation of apricots and grapes.

Almonds, peaches, apples, pears, walnuts, quinces, mulberries, cherries, pomegranates, cherry-plums, plums, figs, barberries, peanuts—indeed, what does not grow in Northern Tajikistan! And in 1949 all the fruit-growers in the region began to grow lemons and other citrus fruits, introduced here only very recently. In four years the collective farmers in Tajikistan planted seven hundred thousand bushes and trees!

Fruit-tree nurseries, new fruit and vine state farms, model orchards, and the experimental grounds of the Fruit, Vine and Vegetable Research Institute, all serve to promote the republic's fruit-growing industry, all help the collective farmers to study Michurin science. In

conformity with the first post-war Five-Year Plan, nearly four thousand hectares of new orchards, nearly five thousand hectares of vineyard, and over a hundred hectares of small-fruit orchards were laid out in Tajikistan. Most of these were laid out in the Leninabad Region. Even the cotton-growing collective farms obtain incomes from fruit-growing running into millions of rubles.

...Kanibadam District. Tractors, and women in red and white dresses, working in the fields. The Lenin Collective Farm adjoins the Socialism Collective Farm.

We plunge into an area of charming green and fragrant orchards and forget the hot and dusty road we have just left behind.

Lenin Street, paved and lined with newly-built houses shaded by trees. We come to a fence, pass through a gate, enter a garden and pull up at the porch of the offices of the Kanibadam District Party Committee.

Kanibadam is a clean, beautiful, well-planned city situated at the foot of Kara-Tau. Straight, shady streets, like avenues. Irrigation ditches run at the edges of the pavements. The entire city stretches along the left, Makhram branch of the irrigation system which for several districts collects the water of the swift-flowing river Isfara.

The Stalin Great Ferghana Canal also runs through Kanibadam, providing water for the collective farms situated around the city. Kanibadam is a compact city; there are no vacant sites, not a patch of unused land. The principal streets are paved, the pretty one- and two-storey houses stand in orchards and gardens. Only a few adobe huts here and there remind one of what the city was before.

Like the dwelling-houses, the foundry and engineering works, the cotton-ginning mills and the spinning mills in the city are surrounded by orchards and rippling irrigation ditches.

The Kanibadam canning plant is as well known in and outside of Tajikistan as the Leninabad canning plant and the canning plants and wineries of Isfara, Chkalovsk, Ura-Tyube and Penjikent.

The fruit-drying department of the Kanibadam plant is one of the largest of its kind in the Soviet Union. Besides fruit, the plant cans meat, meat and vegetable foods, and vegetables. It turns out forty

varieties of products in millions of cans, which are distributed all over the Soviet Union. The confectionery department makes the national sweetmeats: pechak, parvarda, crystal sugar (navat), and others.

It is difficult to imagine that as recently as 1927 there was no such plant in Kanibadam, that the only "industrial enterprise" in the city at that time was an electric-power station, built that year, with a capacity of . . . 30 kw.! And two adobe huts, in which fruit was dried by the old primitive methods, were called "works."

The canned goods turned out in Tajikistan are of a very high quality. At the 1937 Paris Exhibition, the Leninabad canned apricots were awarded the First Prize. Besides canned foods, Tajikistan supplies the people of our country with large quantities of dried fruit. In 1948, the collective farms in the Leninabad Region alone provided the fruit-canning industry with 5,200 tons of dried fruit, and the quantity increased with every succeeding year.

In Kanibadam there are two pedagogical schools—one for men and one for women. In the schools in the Kanibadam District there are more than five hundred teachers. Whoever had occasion to visit this city twenty years ago will remember that there were no special schools here, no real cultural life, not even the ordinary conveniences of life.

The Kanibadam District stretches from the Syr Darya to the mountains between the borders of Uzbekistan and Kirghizia which converge here. In the near future, all the roads in this district will be excellent. In the mountains of Kanibadam there are large deposits of bitumen which is used for asphalting roads. The roads are not bad even now, and motor cars travel from farm to farm in all seasons of the year.

The overwhelming majority of the collective farms in the district are millionaire farms. Besides cotton, fruit and grapes, all the collective farms grow vegetables and breed livestock and silkworms. They also grow alfalfa. The Lakhuti Collective Farm cultivates élite seed. The fields are tilled and harvested with machines drawn by caterpillar and wheel tractors provided by two machine-and-tractor stations. They even have tractor-drawn machines for spraying mulberry-trees to rid them of pests. There are orchards and vineyards all over the district and their area is expanding everywhere.

A collective-farm wine-grower

A self-propelled harvester combine in the field of a collective farm in the Dagana-Kiik District

A collective-farm library

2

The river Isfara winds along its pebbly bed washing its terraced banks which are thickly covered with vegetation. The valley is bordered by two mountain ridges. The steep mountain sides seem to be painted in red, yellow, green and dark brown colours, and the colours change as in a kaleidoscope.

The terraces at the foot of the mountains and the floodlands along the river are completely taken up by cotton fields and orchards. The apricots and oleasters are in full bloom, and as our car spins along the fresh, green right bank we are charmed by the tender shades of colour and the subtle variety in the fragrance of spring. Amidst the collective-farm fields stands a small, but very clean and pretty town. That is the socialist town of Nefteabad, adjoining the old town of Hanabad, the centre of the oil-fields here, known since ancient times. This oil-bearing district extends beyond the mountain ridge, on the left side of the river, where it is called the KIM Oil-Fields.

Only a few years ago from Nefteabad one could see on the mountain side the tips of massive wooden derricks. They had been planted, like a thick forest, in a dry, rugged mountain hollow on the other side of the ridge. Anybody revisiting the place now would wonder what had become of these customary accessories of oil extraction and of the many people who had worked here.

In place of the wooden derricks there are metal structures supporting pumps working in measured rhythm. And there are no people. If you look carefully you see just one woman in blue overalls passing from one pump to another.

What happened here during these few years? And what do these changes signify? We put these questions to Raim Mazaitov, the manager of the combined Nefteabad-Kim Oil-Fields, and he answers with a smile:

"We have put the oil-fields on a new technical basis. In place of the cumbersome wooden derricks we have erected these metal "see-saws" attached to electric motors. They work automatically, and only one person is needed to mind twenty pumps."

The present-day Nefteabad-Kim Oil-Fields, equipped with the most up-to-date plant, have nothing in common with the primitive Santo Oil-Fields opened in 1909, and which, before the revolution, belonged to a shareholder in the Nobel Company, Sukhanov. Nor can the oil refinery now situated in the KIM Oil-Fields be compared with the one built in 1914. Both the KIM and the Nefteabad fields have boring, extraction, and building departments, a machine shop, tractor and automobile parks, and a number of auxiliary departments and enterprises.

The oil obtained here is transported to Melnikovo by a railway that runs through Nefteabad, and from Melnikovo it is transported to the various destinations.

The town of Nefteabad has become a new cultural centre which greatly influences the life of the surrounding collective farms. New dwellings have been built. The town has its own Diesel-driven electric-power station. There are two cinema theatres—one for the winter and an open-air one for the summer. There is a recreation park. The young oil-workers have formed a sports club named "Neftyanik" ("Oil-Worker"). Newspapers and magazines are regularly received in the town. There was a fine public library here, but during the war the citizens decided to send all the books to the front. A new and better library has now been built up.

There is a day nursery, a kindergarten, schools, a drug-store and a hospital. In the vicinity of the town there is a forest-school to which children with weak lungs are sent from all parts of the republic, for the climate here is very healthy.

One usually associates an oil-field with the smell of oil and a dreary, barren landscape. But white and clean, surrounded by apricot, peach and pear orchards, Nefteabad is like a health resort, so pure and fresh is the air one breathes.

The valley spreads out as we approach the town of Isfara. Here the valley is six kilometres wide and lies nine hundred metres above sea level. Surrounded by mountains, fanned by light winds, the air pure and warm, never hot, it lies like a bowl filled with the gifts of nature.

We ride into Shahrak, the ancient part of Isfara, drive down a wide street between rows of tall, silvery poplars, which further on give place

to spreading weeping willows, whose low-hanging branches brush our ears as we glide past. We turn to the right and cross a wide wooden bridge over the Isfara River, over whose swift, cold water protrude the terraces of two large tea-houses, and pull up at a hotel standing on the embankment just across the bridge. From it we get vistas of the straight, tree-lined streets and rows of clean white houses of the new city. The branches of apricot-trees, laden with golden fruit, overhang the garden fences; in the distance the blue sky merges with the snow-capped mountain ridges, and the first wish the traveller is conscious of is to plunge into the swirling river, drink its cold mountain water, and bathe in its crystal stream.

Hail Isfara, city of orchards, city of the sweetest apricots in Asia!

Strictly planned, with straight, intercrossing streets, the porches and windows of the houses, and the city improvements recently carried out, Isfara would have been just an ordinary small town were it not for its orchards. The city is literally set in orchards, is submerged in them, is almost invisible because of them. The poplar-lined streets are so shady that there is no need to seek shade in the summer, you have it everywhere. On entering an orchard it seems to you that you have slipped to the bottom of a leafy lake and you only surmise that the sky is above you—apricots, apples, pears and pomegranates simply ask to be plucked from their low-hanging branches.

You will learn much that is new. You will learn that in the Isfara District orchards occupy an area of 2,500 hectares, more than the orchard area in the Kulyab and Garm regions put together; that 97 per cent of these orchards, not counting vineyards, are planted with apricot-trees; that among the varieties of apricots grown here there are about fifty not known of in the foreign special literature on the subject; that the "mirsanjali" and "hurmai" varieties are famous throughout Asia, for in sugar content they are twice as rich as the best varieties grown in Europe and America; that there are trees in Isfara two hundred years old, and that there are giant fruit-trees which yield crops amounting to eight tons each.

You will then understand how the mountainous district of Isfara can supply the country every year with many thousands of tons of

dried fruit—kuraga, uryuk and apricot kernels, the best canned apricots in the world, and scores of trainloads of fresh fruit.

Everywhere in Isfara there are flowers: flower beds around the shops at the canning plant and at the distillery, and around the schools. The new Canning Industry Technical School has not yet laid out any flower beds, but you can reach it only by passing through an avenue of poplars. Trees shade the premises of the District Party Committee, the public library, the bookshop and the editorial offices of the *Kommunist Isfari.*

Such is the city, such are the surrounding collective farms, which grow cotton, a crop that appeared here only in Soviet times, and grow juicy apricots for which Isfara was already famous thousands of years ago.

3

The green ocean of Isfara orchards ends abruptly and we drive into a dusty, stony valley. The entire Isfara oasis which we have left down below looks from here as if it were squeezed between arid, lifeless shores. A ridge of foot-hills forms a semi-circle round the mountains, multi-coloured, rugged, hopelessly dry and dreary, crumpled by tectonic movements into queer folds and then vigorously eroded and deeply furrowed by the brief avalanches that occur here after rare but heavy rain.

We drive parallel with the line of electric transmission pylons and the railway which cut across this strip of hot desert-land lying on the road to the mountains.

Twelve kilometres further on we approach a wide hollow and at once the city of Shurab comes into view.

We are startled by its beauty, peculiar to it alone—a combination of the wildness of the mountains and the culture of a developed industrial centre.

We notice that the entire reddish mountain ridge in front of us is intersected from top to bottom by roads running right and left, that it is dotted with pit-head machinery and massive buildings crowding round the pit-heads. The ridge is a huge coal-field.

The city is closely hemmed in by mountains. Their slopes are also intersected by railway branch lines. Both near and far we see fuel-tanks, excavators and motor trucks. It is hot in the city, but the dreariness of the mountains and the pebbly ground is enlivened by the new miners' park laid out at the entrance to the city. It occupies an area of seven hectares and is watered not by irrigation ditches, but with water from the conduit system. Water taps are also seen in the small but shady garden around the beautiful new building of the Engineers' Club.

As soon as an abundant supply of water was obtained for the city it became possible to plant gardens around the miners' cottages and also to improve the work of the polyclinic, to finish the equipment of the medical centre and the stadium, and to improve the service at the public dining-rooms.

In 1950 a two-storey department store and a hotel were built, and more and more beautiful public buildings and comfortable dwellings are being built.

This city sprang up quite recently, during the past four or five years, although coal has been mined in Shurab for many centuries.

The systematic exploitation of the Shurab coal deposits began fifty years ago when private capitalists began to lease allotments. Various "companies" sprang up one after another. After exploiting a mine in the most primitive and wasteful manner for a brief period the owner would try to sell it. The employment of machinery, electricity, or safety techniques was totally out of the question at that time. The miners worked almost to exhaustion under frightful conditions; they starved, suffered from disease, and large numbers perished as a result of roof-falls, fire-damp, or underground fires.

The coal was hauled to the surface along sloping shafts not deeper than two hundred metres by means of a winch worked by horses and was either sold on the spot or transported to other districts by pack-animals.

Today all the mining processes are mechanized; electricity has made possible the employment of the most up-to-date mining machinery. The underground workings are connected with the surface by telephone, the coal is carried to the pit-mouth in electric trams. The mines

are now safe, the work is easier, and the miners are well paid. In Shurab twenty-one miners have been awarded the title Merited Miner.

What a striking contrast there is between the miners of Shurab today and those who toiled and starved for private capitalists before the revolution.

Miners' earnings today range from three to eight thousand rubles a month, and many earn even more. Those living in the surrounding kishlaks have built themselves new houses with orchards and vineyards. Radio sets and electric stoves and utensils have become ordinary accessories of home life. Many miners have their own motor cars, and car owners living in distant kishlaks ride in them to work every day.

The Shurab miners maintain close, friendly relations with the surrounding collective farms. The mine management often helps them out with transport facilities, fuel, building materials, repair of farm implements, and it supplies Isfara with electricity. The miners go out to the farms to help to harvest cotton. In return the collective farms abundantly supply the miners with fruit and vegetables, although Shurab has orchards, rice fields, vegetable gardens and pig farms in Isfara and Lyakkon.

The cultural influence Shurab exercises upon the entire district finds expression in many ways. The amateur art circles in Shurab give performances in Isfara, at the KIM Oil-Fields and in Nefteabad. The miners' sports club organizes competitions at its own stadium and also with the kishlaks in the district.

4

We go back along the road to Leninabad, but we by-pass that city, come out on an excellent road, drive through the Chkalovsk, Proletarsk and Nau Districts and climb to the foot-hills of the Turkestan Range, to the boundless vineyards and orchards of Ganchi, beyond which stretch the equally extensive vineyards of Ura-Tyube. From the top of a hill it is worth while taking a look at the Ferghana Valley stretching behind and below us. We shall not see it again after entering the softly outlined hollow, beyond which stands the ancient city of Ura-Tyube.

We seem to have come right close up to the dazzling, white summits of the Turkestan Range, which towers like a wall over the city; and spreading towards it are the green, velvety carpets of mountain pastures. Two tall hills—Tar and Moog—stand like sentries over the road that runs between them. On their slopes we see two rows of ancient, half-ruined walls and the ruins of gates. At one time, all the kishlaks around Ura-Tyube formed part of a vast fortress.

The city, which arose many centuries ago in the territory of Osrushana, was an important fort which blocked the road from Ferghana and the Hungry Steppe to the Zeravshan. Many conquerors fought the defenders of this fort under its high walls, many broke into it, destroyed the city and slaughtered its handicraftsmen, fruit-growers and vine-growers. Alim-Khan of Kokand alone attacked the city twelve times!

The ruins of the towers and walls and the Kok-Gumbez Mosque, a sample of fifteenth century architecture, are the only surviving relics of the past. This mosque, once magnificently ornamented with coloured mosaic tiles, is, indeed, interesting. It was built in the time of Ulugbek, or somewhat later.

Together with those of Khojent the craftsmen of Ura-Tyube have been since ancient times famous for their skill, handing down their respective arts from generation to generation. Their knives and daggers, carved wooden and engraved metal vessels, embroidery and fabrics, skull-caps and gowns, were highly valued in Central Asia. The jewellers supplied the whole of Central Asia with rings, bracelets, earrings and other gold and silver ornaments skilfully set with precious stones.

The present-day smiths, weavers, engravers, potters, silk embroiderers and skull-cap makers, united in handicraft co-operative societies, have retained the skill they acquired from their fathers and grandfathers. Other towns in the republic invite the Ura-Tyube plaster moulders, wood carvers and mosaic tile layers to decorate the new buildings that are being built there. For example, Ura-Tyube craftsmen made the plaster mouldings in the recently-built Government House in Stalinabad.

Kasym Rakhmatullayev, a decorator of pottery, was awarded a Gold Medal at the International Exhibition of Art and Industry held in Paris in 1936.

But the city of Ura-Tyube is interesting today not so much because of its relics of the past, or even because of its skilled craftsmen. It is interesting as an industrial and cultured city of Soviet Tajikistan, the centre of its vine-growing and wine industry.

Its grape-drying plants and wineries process the huge crops of grapes grown by the collective farms in the district.

Ura-Tyube stands on a level six hundred and fifty metres higher than Leninabad, its average annual temperature is over three degrees lower than that of Leninabad, and the climate is therefore wonderful—not too hot in the summer, mild winter with plenty of snow, and abundant rain in the spring. The fertile, grey soil of the Ura-Tyube District is watered by mountain rivers and the purest of springs. Consequently, the conditions for vine-growing in these parts are splendid.

In Ura-Tyube, as well as in Varzob, Yavan, Koktash, Muminabad and Kzyl-Mazar, numerous experimental stations are being opened for non-irrigated vine-growing. In the Tajik Republic, vine-growing occupies an area of about nine thousand hectares. The greater part of these vineyards are concentrated in the Ura-Tyube District. The grapes grown here are large and exceptionally saccharine and "extractive." Varieties like "angur-kalon," "bakhtiori" and "jaus," grown at the best collective farms—the Mekhnat and Stalin Collective Farms, for example—have enormous yields, as much as two hundred and even two hundred and fifty centners per hectare. The "bakhtiori," "jaus," "nagal," "nalizok," "dondon," "shukur" and other first-grade dessert and drying varieties are famous throughout the world for their exceptional qualities. And the collective farms which grow them and improve them year after year are becoming new centres of the science of plant-breeding in Tajikistan; and obtaining enormous incomes from the sale of their crops, their members are able to live in a way entirely different from the way they lived even three or four years ago.

The Ura-Tyube winery is constantly improving and increasing the brands of wine it turns out. The fact that the state vineyards and state

wineries in Tajikistan now turn out about forty brands of wine is mostly due to the efforts of the Ura-Tyube wine-makers.

On a par with Isfara and Kanibadam, Ura-Tyube is famous for its fruit canning and drying plant, which provides our country with excellent dried currants and canned apricots and other fruit.

In Ura-Tyube they make even more Oriental sweetmeats of every possible kind than they do in Kanibadam—kandalat, mishalda, navat, and so forth.

The apricot, peach and apple orchards of the Ura-Tyube collective farms annually supply our country with many thousands of tons of fresh and dried fruit.

The Ura-Tyube District, however, is not only rich in orchards and vineyards. It is also well known for its developed livestock farming. Moreover, the collective farms in this district, as well as in the neighbouring Shakhristan District, extensively grow oil-bearing and cereal crops, primarily wheat.

We drive past these wheat-fields, and the motor road, winding over the hills, leads us deep into the mountains. Grazing on the mountain sides are droves of the fleet Karabair horses for which Ura-Tyube and Shakhristan have long been famous. Vast herds of cattle roam the mountain pastures, browsing on the succulent grass lightly covered with snow. To the right of and lower than the road running between these pastures we leave behind the administrative centre of the Shakhristan District famous not only for its agriculture and livestock farming, but also for its sanatorium for consumptives to which patients from all parts of the country come to drink kumiss, that is, fermented mare's milk.

The steeper the foot-hills of the Turkestan Range rise the severer the climate becomes, the sharper is the wind that blows from the snow-fields, the more abruptly are the collective-farm fields and pastures cut off by crags which tower up from the steep slopes, the more closely are we hemmed in by the gorges of the magnificent Turkestan Range.

Through the narrow valley of the river Alty-Kol we climb up this range to the cold Shakhristan Pass.


KUKHISTAN

1

THE GEOGRAPHICAL region known as Kukhistan ("Land of Mountains") is bordered on the north by the crests of the Turkestan Range, on the east by the Kok-Su mountain junction, where the great Zeravshan Glacier is situated, and from which the river Zeravshan ("Distributer of Gold") takes its source, on the south by the crests of the Hissar Range and on the west by the Kshtut Darya, a left tributary of the Zeravshan flowing northward.

In this secluded region there are wild, almost inaccessible mountains, until only recently little explored, adjoining one another, radiating in whimsical pattern, and cut by narrow, unusually steep gorges.

The landscape of Kukhistan presents to the traveller a wild and terrifying picture.

The chief ranges of these mountains—Turkestan, Zeravshan and Hissar—stretch from the east and gradually slope downwards to the west. There, in Uzbekistan, they dwindle and merge into the broad plain.

From the west through the valley of the Zeravshan, the natural entrance to this wild, mountainous country, came the people who fled to Kukhistan to seek refuge from the different hordes of conquerors who invaded the plain. The peaceful inhabitants of Sogdiana, the ancestors of the present-day Tajiks, fled here from pursuit by foreign invaders. Pushing up from Samarkand and Penjikent through the valley of the Zeravshan (called the Sogda in ancient times) the Sogdians scattered through the wild mountain gorges: the Matcha, Fan Darya, Yagnob, Magian Darya, and others. At critical moments in their history the

Sogdians defended themselves from invaders behind the walls of the ancient forts of the local highland rulers. Ruins of these forts are still to be found in all parts of Kukhistan.

Excavations made in 1933 of an ancient castle on Mount Moog, near the village of Hairaboz, not far from Zakhmatabad, led to a discovery that caused a sensation throughout the world; here were found Sogdian manuscripts of the seventh and beginning of the eighth centuries which had been hidden from conquerors by Divashtich, the ruler of Penjikent. In addition to the manuscripts several other articles were found, among them a wooden shield covered with hide, on which was painted in various colours a Sogdian horseman mounted on a richly caparisoned horse.

In 1948-49 the Sogdio-Tajik (renamed the Tajik in 1952) Archaeological Expedition headed by A. Yakubovsky, which has operated in Tajikistan for a number of years making excavations in the town of Penjikent, made new discoveries of great importance; under a stratum of alluvium it found two temples and a large architectural ensemble built in the time of Divashtich.

These seventh and eighth century buildings of very interesting architecture are ornamented with artistic mural paintings of complex subjects, depicting whole groups of people; they are realistically executed scenes from the life of the ancient Sogdians.

The buildings were found in the state they were left in by the Arabs who raided Penjikent and wrecked not only the town, but also the Sogdian necropolis, broke open the tombs in search of valuables and in their fanatical religious hatred obliterated the faces of the people depicted in the mural paintings. History revealed to our Soviet archaeologists the actual scene of the fierce struggle that was fought in the corridors of the palace where, for example, an arrow-head was found transfixed in a door-post.

The expedition is making a detailed study of this wonderful relic of the ancient past, which tells us among other things that in pre-Arab times Penjikent was undoubtedly an important centre of the ancient Tajik art of painting. In 1952 the expedition made still further astonishing discoveries: when excavating one of the buildings, sculptures were

found depicting mythological scenes. Although made of common clay, these sculptures are executed with amazing perfection. There can be no doubt that further excavations of this ancient city, which are to take a number of years, will provide a wealth of new material for studying the entire culture of the Sogdians.

The Tajik people, who have given the world philosophers and poets like Abu Ali Sina, Rudagi, Firdousi, Nosir-i-Hosrou, Kamol Hujandi (Kamol of Khojent) and others, are justly proud of their ancestors, the Sogdians, creators of high artistic values and also brave fighters who heroically resisted their conquerors.

The entire cultured world knows the name of Spitamen, the first Sogdian military leader who in 329 before the present era raised a revolt against the troops of Alexander the Great, who had invaded Bactria and Sogdiana and had captured the flourishing capital of Sogd, Marakanda, the present-day Samarkand.

Spitamen rallied the people, liberated Marakanda, and for a whole year after struck the Greek forces heavy blows in all parts of indomitable Sogd and in the expanses of Bactria.

Already at that time Kukhistan, almost inaccessible and easily defended, with its impassable mountain slopes and gorges which were a terror to invaders, became a vast fortress in which the Sogdian people could feel secure.

The archaeological investigations that are being made in our times are opening page after page of the ancient history of the Tajik people. The discoveries already made show that the ancestors of the Tajik people made their contribution to the development of civilization equally with the other peoples of Central Asia.

2

There are more than twenty known passes over the Turkestan Range through which it is possible to enter the Valley of the Zeravshan, but to this day all but one can be crossed only on horseback or on foot. That one is the Shakhristan Pass, about 3,500 metres above sea level, which a swift Pobeda car can easily cross in the summer.

Spinning down a steep motor road we descend to Kukhistan and enter the Zakhmatabad District, which occupies the whole of the middle part of the Zeravshan Valley.

The valley is narrow. Its terraced sides break off abruptly at the river forming steep banks a hundred to two hundred metres high. Above the terraces tower the wild, bare crags of the mountains, but on the terraces stretch rows of kishlaks almost hidden by mulberry, apricot and apple orchards, forming beautiful borders along the whole length of the Zeravshan.

Besides fruit the collective farmers living in these kishlaks grow wheat and vegetables, raise cattle and breed silkworms.

Crossing the river twice to the left bank and back to the right we enter Zakhmatabad, one of the district administrative centres of the Leninabad Region. A little higher up, the river Matcha, which flows out of an enormous glacier, merges with the equally deep and swift Fan Darya, which flows from the south across the Zeravshan Range through a deep gorge having exceptionally steep sides.

It is from this point of junction of the Fan Darya and the Matcha that the Zeravshan takes its name, and only in recent years has the name been applied to the whole of the Matcha, right up to the Zeravshan Glacier.

Zakhmatabad is situated on a high terrace on the right bank of the river, surrounded by steep mountains. It is over a thousand years old, and until quite recently it was called Varzaminor, which means "High Minaret." For six or seven months in the year, when the passes are blocked by snow, the town is cut off from Stalinabad and Ura-Tyube. During these months it can be reached with great difficulty by automobile only from Penjikent.

There is little space for the houses and orchards of the kishlaks along the Zeravshan. The houses are built on terraces, one above the other, the flat roofs of those below serving as verandas for those above. The lanes are so narrow that a horseman riding through some of them must to protect his head push aside the branches of the mulberry and apricot trees which reach across the lane. The orchards are neat and well-kept and have irrigation ditches with the purest water running

through them. The trees are planted so close together that no branches grow from the lower parts of the trunks, while the upper parts support a leafy ceiling overspreading the entire orchard. Those orchards are like rooms, or rather, like arbours, separated by columns of tree-trunks and by fences built of rough stone. Nature compels the people here to live in this state of picturesque congestion, but collective-farm life has wrought many changes in these kishlaks. In the kishlaks of the Molotov, Shulai-Inkilob, October and many other collective farms the streets have been widened and planted with trees; they have recreation clubs, tea-rooms and reading-rooms, and the sides of the irrigation ditches are paved.

Through the green foliage of the kishlaks we catch glimpses of white school and other public buildings; at night the houses and gardens are flooded with electric light which, breaking through the dense foliage, merges with the moonlight.

At the present time motor cars and trucks travel freely from farm to farm along the new roads that have been built along the whole of the Zeravshan Valley.

In its lower part, in the Penjikent District, the valley is fairly wide and gradually spreads out into a plain; there is more space, and rice and tobacco grow well here. The big orchards in this district are separated from one another by irrigated fields. The mountains here are low and sloping, and every year they are to an increasing extent being used for non-irrigated farming. But nearer to the middle course of the Zeravshan the valley becomes narrower, and the mountains are higher and steeper. At the place where the kishlak Dashta Kazy is situated the valley changes abruptly; it suddenly becomes hemmed in by a gorge and is bestrewn with rocks that come hurtling from the mountains. Here every patch of soil is precious. Only in those places where the tributaries of the river burst through the lateral canyons are there so-called "alluvium cones,"—low hills and sometimes flat patches of soil on most of which kishlaks, orchards and fields are situated, intersected by irrigation canals running down from the heights of the lateral gorge.

Such is the character of the localities in the Zakhmatabad District. All the inhabitants of the kishlaks are united in collective farms, which

engage mainly in fruit-growing and livestock farming. Amidst the large stretches of apricot and mulberry orchards there are also patches of apple, pear and peach.

Zakhmatabad, Urmitan and other kishlaks along the middle course of the Zeravshan have become centres of the kuraga industry, i.e., the drying of apricots and peaches. Every year hundreds and thousands of tons of this dried fruit are transported from here *via* Penjikent.

Of still greater importance here, however, is the cultivation of mulberry-trees. These trees can grow on any soil, on the bare mountain slopes, or in the rock-bestrewn valley. And you meet them everywhere, in orchards, in narrow lanes, and on the steep mountain slopes rising above the kishlaks. The mulberry-trees here are nearly all grafts, and there is scarcely a variety that is not found here.

In the Badakhshan, Garm and Kulyab regions, in all the mountain districts of the republic, mulberry-trees grow in all the kishlaks; they are regarded as the friends of man and are protected by the entire population. They surround the houses on the steep mountain slopes and at the bottom of tight and narrow gorges.

When the berries ripen at the end of July and in August every family sweeps its mulberry garden thoroughly and packs the earth hard around every tree. These round patches are kept perfectly clean; not a single chicken or lamb is allowed to go near them.

When gathered, the berries are laid out on the roofs of the houses to dry in the sun. When dried, they are ground into flour and pressed into a hard mass called "tut-pist," a delicious and wholesome sweetmeat.

Bekmes, a sweet syrup like honey, is boiled from the juice crushed from fresh mulberries.

In Soviet times mulberries have long ceased to be a staple food of the people here, and tut-pist and bekmes serve only as delicacies to go with tea, together with almonds, walnuts, dried apricots and peaches.

The collective farmers living in the mountain gorges are now prosperous, and in those places where there is too little land to grow produce they can afford to buy food products imported from other districts. Consequently, the mulberry-trees are now used mainly for

breeding silkworms, and in the districts where these trees are plentiful the silk cocoon industry is developing rapidly. This industry has become an important branch of the economy of all the mountain districts of the republic, and of Zeravshan in particular.

Before collective farming was introduced, silkworm breeding was carried on in the Zeravshan Valley only in a few villages near Penjikent. Now, however, it is being carried on everywhere, and the farmers have raised varieties of the mulberry-tree which, without any detriment to fruit-growing, provide big cocoon harvests and serve as a basis for the artificial selection conducted by the plant-breeders in the Zeravshan Valley. These varieties are acquiring a quality superior to the best productions of the plant-breeders in Europe and Japan.

During the first post-war five-year plan period the Zeravshan Valley became one of the most important raw material bases for the development of the silk industry throughout the whole of Tajikistan. And side by side with giant, thousand-year-old mulberry-trees growing in the valley, there are now innumerable young striplings, many of which will also live for a thousand years.

3

The higher you climb up the course of the Zeravshan and the nearer you draw to the Matcha you find that the valley, now hemmed in by the mountains, becomes poorer in arboreous vegetation; in this severer climate mulberry-trees give way more and more to apricot, apple, pear, walnut and sweet and sour cherry.

As everywhere else new orchards are being laid out in mountainous Matcha, but here the work is exceptionally hard, for every square metre of soil has literally to be wrested from the rocks. Like all the other higher-level districts of Kukhistan, the characteristic feature of the economy of the Matcha District is not fruit-growing, but highly-developed livestock farming, which is an important branch of the national economy of the republic.

To the south beyond the ridge of the Zeravshan Range, parallel with the river Zeravshan, stretches the high-mountain valley of the Yagnob.

Further, beyond the upper reaches of the Yagnob, below the watersheds of the Hissar and Karategin ranges, the Garm Region begins. The distance from the Zeravshan Glacier to the river Surkhob and to Garm, due south, is not more than seventy kilometres; but there are no roads here, there are only narrow, dangerous tracks, winding over steep precipices and through most difficult passes. Nevertheless, bold herdsmen drive their goats and sheep over these perilous tracks to the almost inaccessible but bounteous spring, summer and autumn pastures.

In the zone where no fruit-trees grow the terraces of the Zeravshan are bestrewn with glistening black shale shingles, which slip from the mountain sides. Here and there on the slopes are clumps of bushes—prickly almond and briar. Behind steep rises in the lateral gorges, smooth valleys lie hidden. Here, on the dark grey soil, fodder grasses grow in abundance, including the umbelliferous plant known as yugan, which the inhabitants use extensively for preparing winter fodder.

The rocky piles, deposits and terraces of the Zeravshan basin, particularly of the Matcha and Yagnob, are, in general, rich in flora. The botanists Olga Fedchenko, Lipsky and Komarov, the most outstanding explorers of the Kukhistan mountains of their time, were the first to make a detailed study of the innumerable varieties of flora found only here, many of which are of exceptional interest for plant-breeders.

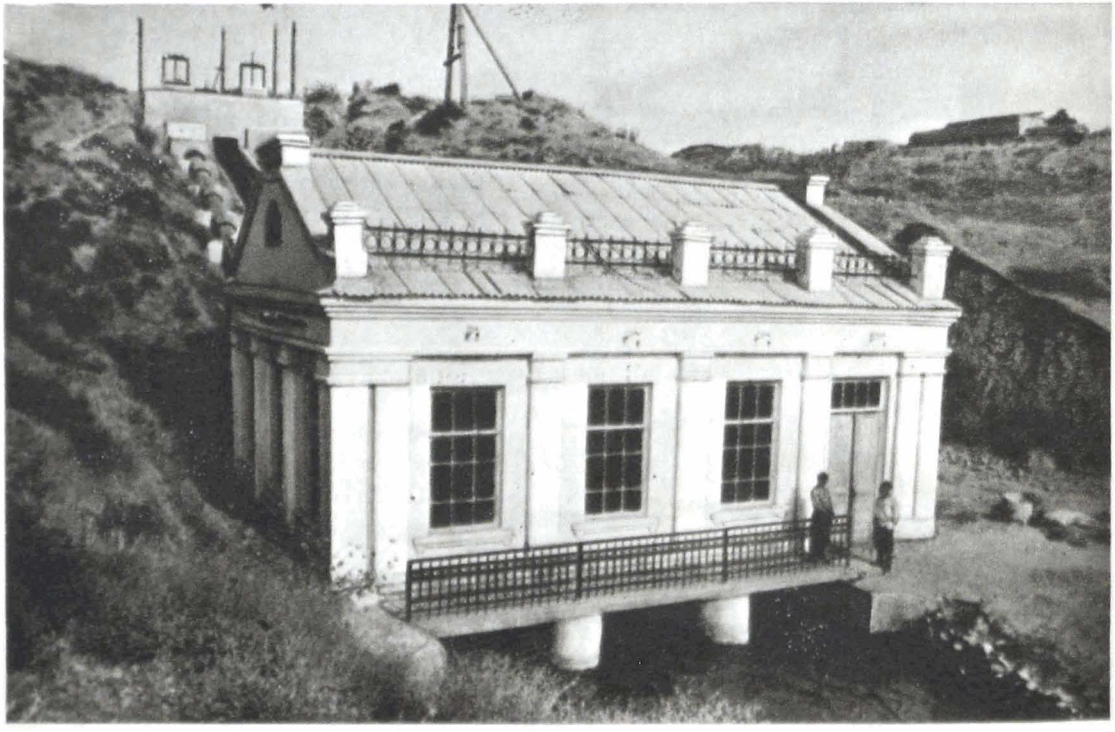
The investigation of the fodder grasses of Kukhistan made in Soviet times has led to most interesting scientific discoveries. Scores of plants of different botanical families have been found, the characteristic feature of which is that their roots or bulbs are excellent means of breeding these plants and cultivating them on a large scale. Those are the so-called ephemeras, which develop quickly in the winter and spring, but fade in the summer.

These ephemeras growing in the mountain valleys of Kukhistan form the so-called short-term, but very rich spring pastures.

When summer comes the Matcha herdsmen drive their flocks and herds to the meadows still higher up to graze on the succulent grass growing on the mountain black earth and brown soils.

The Sogdio-Tajik Archaeological Expedition of the Academy of Sciences of the U.S.S.R. and Academy of Sciences of the Tajik S.S.R. made excavations of the ancient city of Penjikent (VI-VIII cent.). Photo shows Prof. M. M. Dyakonov, Dr. Hist. Sc. (right) and A. M. Beletsky, Candidate of Hist. Sc., examining the materials obtained from the excavations

A flock of Hissar sheep in a mountain pasture



The hydro-electric station at the Khrushchov Collective Farm, Shakhrinau District

By August, climbing higher and higher towards the crest of the ranges around the Matcha, in the marches of Gulbos in Yagnob and other places like them, the cattle reach the luxuriant, snow-covered meadows, the tall grasses of the excellent alpine pastures. Although limited by heaps of fallen rock and glacial moraine, these pastures are so rich, the grass is so succulent that it suffices not only for the local cattle, but also for those of the remotest collective farms, whose herdsmen drive here flocks and herds consisting of tens and even hundreds of thousands of sheep and goats. They come here from the northern districts of Tajikistan—as far off as Asht, and from the southern districts—Hissar, Shakhrinau and Pakhtaabad. Before the revolution cattle were driven here even from Afghanistan.

Before winter sets in the herdsmen drive their cattle down again to the warm valleys, and only those from the Matcha, Yagnob, and from the other high-mountain gorges of Kukhistan remain in their snow-bound collective farms. Socialist culture, however, reaches even those livestock farms in Matcha and Yagnob. The Kuibyshev Collective Farm in Matcha has a hydro-electric power station which provides electric light for the farm offices and buildings and also for the hundred and fifty farmers' homes, which were formerly lit by crude oil lamps. Before the revolution the dehkans (peasants) in the district now occupied by the collective farm had not even a single goat of their own. Now, however, the collectively-owned cattle amount to an average of over sixty head of cattle per household, and every household individually owns several head of cattle. The farm owns a flock of over twelve thousand sheep from which alone it obtains an income of about half a million rubles per annum. During the past few years all the livestock farmers in upper Matcha have built numerous new houses and have enlarged their cattle barns, sheep pens and stables, for their wealth is increasing year after year, their flocks and herds are growing and their incomes are increasing. Newspapers are delivered here, radio broadcasts are heard, and in the bright, warm tea-rooms the farmers, young and old, heatedly discuss world events.

4

Not so very long ago, the traveller, after crossing the Zeravshan and entering the narrow gorge of the river Fan Darya, had to creep along a narrow perilous track that ran along the ledge of steep precipices and over immense rock-falls. Not a single caravan escaped accidents. If a pack animal slipped from the track it would go hurtling from crag to crag and be converted into a bag of broken bones before it reached the swirling Fan River.

Now an excellent motor road runs along the steep bank of the Fan Darya, crosses the river at the spot where the primitive, crazy Pul-i-Mullo bridge once stood, and then rises to the ancient fort of Sarvadar, the picturesque ruins of which look like a stage setting at a theatre.

Immediately beyond Sarvadar there is a junction of rivers. The river Yagnob, flowing from the east, makes an abrupt turn southward and from there on is called the Fan Darya, into which flows the Iskander Darya. The motor road continues upward along the Yagnob.

It is possible, however, to drive by car for another twenty kilometres or so up by the river Iskander Darya, but the traveller has then to leave his car at the kishlak Jijik and continue the journey to Lake Iskander on horseback by a narrow track. After riding for about three hours the traveller will hear a continuous, monotonous rumble. The narrow ribbon of the river has disappeared far below. You can dismount, turn off the track, take the risk of descending a very steep slope and then creep to the edge of a deep rocky gorge, narrow, but of terrifying steepness. If you lie down flat and look over the edge a wonderful scene will meet your gaze. The mighty Iskander Darya, hemmed in by the walls of the gorge, suddenly leaps over a ledge and hurtles down in a beautiful cascade to a depth of forty-six metres where, compressed to a width of only a few metres, it goes tearing along in a frightful rage.

A little higher up from the waterfall is lake Iskander, the source of the Iskander Darya. One can look for hours at the mirror-like surface of the lake watching it break through the narrow gates of a rock-fall and turn into a mighty, swift and foaming river, surging over numer-

ous rapids. What an immense amount of power waiting to be used! What a vast reservoir is Iskander-Kul, lying at a height of 2,209 metres above sea level!

Over the lake towers Mount Dozhdemernaya, behind which rise the slopes of the snow-capped Hissar Range, some of whose peaks are as much as five kilometres high. They are reflected in the cold, blue, translucent water of the lake, which is so pure that there is scarcely any silt in its bed.

Like most of the mountain lakes in Tajikistan, this beautiful lake was formed as a result of a gigantic oppilation. In area and capacity it is not very large—its surface covers only three and a half square kilometres, and its depth does not exceed seventy-two metres. The wonderful thing about it is its gigantic power; in the course of a year it hurls down nearly eight hundred million cubic metres of water. It obtains this power from the glaciers and snow on the mountains which tower above it.

The hydro-electric power potential of Tajikistan is estimated at 25,000,000 kw., over four times as much as that of the whole of France and seven times as much as that of Germany.

In a grove near the lake 2,268 metres above sea level there is the white stone building and all the equipment of the Iskander-Kul Climatological Station, which was set up in 1929.

The station is well supplied and equipped with the latest scientific instruments, including astronomical, for the weather conditions at Iskander-Kul are extremely favourable for observations, and a mountain astronomical station is to be erected here.

The station staff heartily welcomes the rare traveller who visits the place, and the traveller himself is glad of the opportunity to rest after his wanderings in the rocky mountains.

5

The return journey on horseback down the Iskander Darya is hardly noticeable, for the traveller's mind is too full of impressions. And when the door of the Pobeda waiting for us at the kishlak Jijik is slammed

and the car sets off again to cross the Fan Darya and drives up the Yagnob Valley on a fine motor road we are astonished by the sudden change in the landscape. What has become of the orchards and trees? There are scarcely any in Yagnob. The valley is dry and dreary, bestrewn with heaps of moraine and rock that slip from the mountains. Barley fields are enclosed with rough stone fences; sheep wander on the mountain sides, nibbling the dry grass. The kishlak Ravat stretches along the banks of the river. In the kishlak there are new, urban-type houses, occupied by the workers at the local coking plant.

A little further on our car drives through the "capital" of the Yagnob Valley—the kishlak Takfon. It seems strange that although situated at a relatively low altitude, only 1,984 metres above sea level, it resembles the kishlaks in the highest mountains. It has the same rough-stone built houses crowded together, and the same labyrinth of narrow lanes instead of streets. A few rows of poplars and other trees scattered here and there only serve to emphasize the dreariness of this kishlak. But there are many new inhabitants in Takfon now—builders who here, as everywhere in Tajikistan, are erecting dwellings and also schools, recreation clubs and other cultural institutions.

In Takfon there is a geological office, an automobile repair plant, a post and telegraph office and a medical centre; and yet it seems that only recently the Yagnob Valley was so cut off by the mountains that in their primitive seclusion the people here spoke a dialect, the so-called "Yagnob tongue," which differed from all the dialects spoken in the region. At the present time this dialect is spoken only in the upper reaches of the Yagnob Valley, beginning with the kishlak Margtumain.

From Takfon we drive on to the next kishlak, which is as dreary as the one we have left. There the road turns towards the mouth of the river Anzob and leaving the Yagnob Valley rises steeply to the Anzob Pass. The Yagnob Valley runs further eastward to the Gulbos high-mountain pastures and to the numerous glaciers at the junction of the Zeravshan and Karategin ranges.

In some places the river flows smoothly and slowly like the Russian rivers, unhindered by rocks or other impediments, and at others, hemmed in by narrows, it suddenly sweeps over stair-like ledges and

rushes onward in a surging stream. Near the kishlak Khshortob, such a steep ledge was formed by an enormous landslide caused by an earthquake some time in the distant past. The river sweeps over this ledge in a roaring cascade and disappears under gigantic rocks. The entire gorge vibrates with the force of the rushing water. A little lower down, however, the river breaks through to the surface again and continues to flow unhurriedly along a broad, unobstructed bed.

Rising from the Yagnob to the pass across the Hissar Range, the road winds in numerous loops cut in the mountain crags overhanging the gorge.

It is cold. We are already near the snow-line. The Hissar Range, stretching into the distance for two hundred and fifty kilometres, rises above the Yagnob in a short, steep slope. It does not seem to be very high from here, although its crest reaches an average of 4,500 metres above sea level, and in the east its peaks—Rostovtsev and Barzengi—reach a height of 5,400-5,700 metres.

But as soon as we reach the Anzob Pass we see how abruptly the appearance of the Hissar Range changes on its southern side. Its southern sides slope downward and outward for a distance of nearly a hundred kilometres. Its long deep gorges mark the beginning of Central Tajikistan, i.e., the districts that gravitate towards Stalinabad. At the bottom of those deep gorges covered with luxuriant vegetation there is a whole network of rivers, winding in the most whimsical fashion.

On the summit of Anzob, among patches of eternal snow and diverse vegetation, we see a meteorological station. On the mountain sides there is an abundance of large yellow flowers—the "Tajik lychnis," or adonis.

The large and beautiful kishlak Ziddy comes out to meet us, as it were, with ploughed fields, orchards, green terraces and rippling water everywhere. Not far from here coal is mined for Stalinabad.

The excellent motor road runs on further along the river Ziddy, which is hastening to meet the river Maikhura. Uniting, the two rivers speed to the south as the mighty and turbulent river Varzob which is fed by innumerable tributaries flowing from the narrow gorges. Our

car turns along one of these tributaries in order to climb to the Hoja-Obi-Garm health resort, which is famous throughout Tajikistan.

The Hoja-Obi-Garm mineral hotsprings were discovered in the nineteenth century by the Russian traveller L. Borshchev. He told the local inhabitants about the healing properties of those springs and advised them to dig two pools here. The place soon became famous, and from that time onwards many people came here for treatment every year, sometimes from places hundreds of kilometres away.

It has long been known that there are numerous mineral and thermal springs in Tajikistan. The kishlak Obi-Garm, now the administrative centre of the district, situated on a small tributary of the Vakhsh, is famous for its natural sulphur baths. Recently a health resort was opened there, and in the 1952 season alone five hundred people received courses of treatment.

In the upper reaches of the Ziddy there are the well-known Hoja-Sang-Hok springs, which provide a quarter of a million litres of cold carbon dioxide mineral water per day. In Pamir there are the hot pools of the river Garm-Chashma, and the mineral water springs at Toguz-Bulak in the marches of Jilandy. At one time people came here for treatment from North-West India, Sinkiang and Afghanistan. But only in Soviet times were real sanatoria set up at these mineral hotsprings.

At Hoja-Obi-Garm, at a height of 1,757 to 1,804 metres above sea level, there are twenty-five radio-active mineral-water springs flowing from pink granite and alluvium, the temperature of the water ranging from 41° to 86°C. Here a Soviet health resort was built in 1935.

The sanatorium buildings, the polyclinic, the mineral water baths and sun and air bath grounds are situated amidst snow-capped mountains, hazel and elm groves, near the glacier that closes the gorge and the flower-bestrewn alpine meadows. A more beautiful place can scarcely be imagined.

6

The Hoja-Obi-Garm health resort is not at all far from Stalinabad, only forty-six kilometres, but there is much that is interesting on this short road.

We catch a glimpse of the kishlak Gushary on the riverside. An excellent road branches off from the main road and, crossing the river by a bridge, runs deeply into the Takob Gorge. Down below, along the bank of the Varzob, we see a narrowgauge railway. It stretches here from Stalinabad.

In the summer of 1932 a scientific party headed by Yekaterina Polyakova, a young woman explorer, conducted operations in the upper reaches of the Takob Gorge. Besides other minerals, the party found in granite and quartz porphyry several deposits of fluor spar. The only means of access to this place was a pack-horse track encumbered by fallen rock. The entire gorge was uninhabited.

In November 1948 the Tajikistan newspapers published photographs and descriptions of a new industrial enterprise that had started operations in the republic—the Takob mining plant.

It was not easy to build this plant. Metre by metre the workers bored into the mountain, blasting the rock with ammonal, and operating drilling machines, hydromonitors and powerful stone breakers. They built spillways, a derivation canal, a hydro-pressure junction, a large hydro-electric station and factory buildings; they installed most complicated machinery, deepened and widened mine galleries and carried electricity into them for lighting and for power to drive mining machinery.

On terraces cut in the mountain side they built solid two-storey houses and converted the once deserted gorge into a compact, modern, well-appointed city. They built a large hotel, a hospital and a polyclinic, a Stakhanov school, a kindergarten and day nursery, a dining-room, a Palace of Culture, and scores of other buildings: machine shops, a garage, a bakery, and every other kind of enterprise needed for the normal life of the inhabitants of this new socialist city.

In the winter months it was often necessary, on the site of the plant and on the roads leading to it, to wage a fierce struggle against rock-falls, landslides and avalanches, to erect barriers against them.

At last the day arrived when all the switches were put in and the greenish-blue rock rolled down the chute to the stone-breaking machines and from there to the other processing departments.

A column of motor trucks, decorated with red flags and accompanied by exultant builders, carried the first tons of fluor spar down by the Varzob.

Like the other mining plants built in the mountains of Kukhistan the Takob plant became a Soviet cultural centre which influenced the kishlaks situated in the surrounding gorges. Power transmission lines already run from the Takob Hydro-Electric Station to the Sovnarkom, Maorif and other mountain collective farms in the Varzob District. The mining plant supplies the farms with all necessary materials and machines and renders them technical aid.

The same assistance to surrounding collective farms is rendered by the Kshtut, Ravat and Ziddy coal-mining plants, and by the other mining cultural centres in Kukhistan.

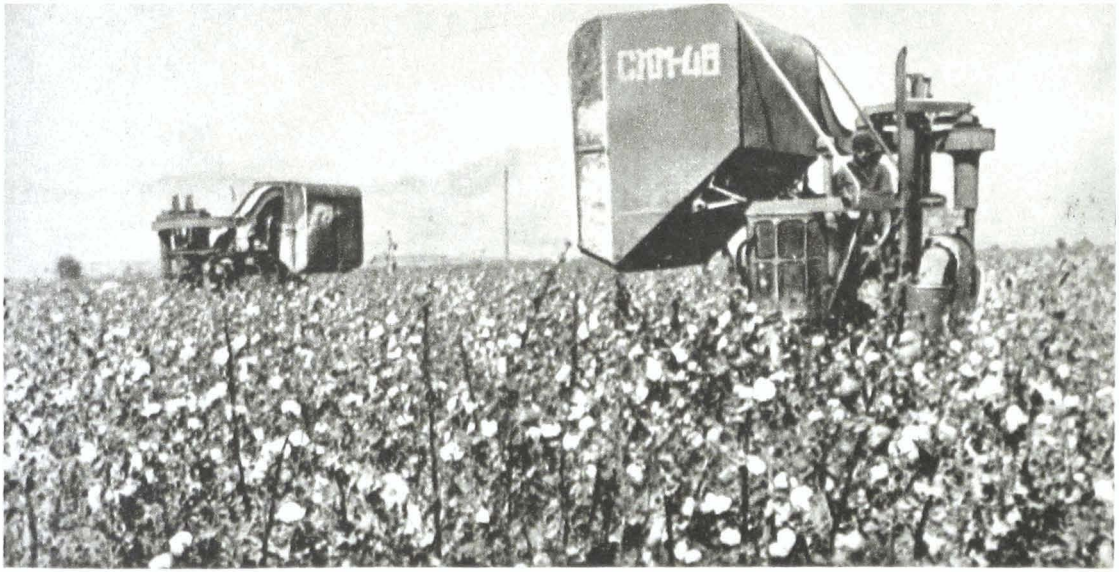
In Kukhistan, which is rich in minerals, the mining industry is continuously expanding, thus facilitating the rapid industrialization of Tajikistan. Many of the inhabitants of the kishlaks on the Turkestan, Zeravshan and Hissar ranges go to work in the mines, study hard in their spare time, then go to college and become mining engineers or technicians. Kukhistan, a wild region not so long ago, is catching up with the advanced districts of the republic.

7

Following the intricate windings of the gorge the road runs downward parallel with the boisterous Varzob and the narrow-gauge railway alongside of it. Above the road we catch a glimpse of one of the small, collective-farm hydro-electric stations which provides electric light for Varzob, the district administrative centre which nestles in a lateral gorge, for its tea-house standing amidst mulberry and elm trees, and for its dining-room, the haunt of all the long-distance motor drivers.

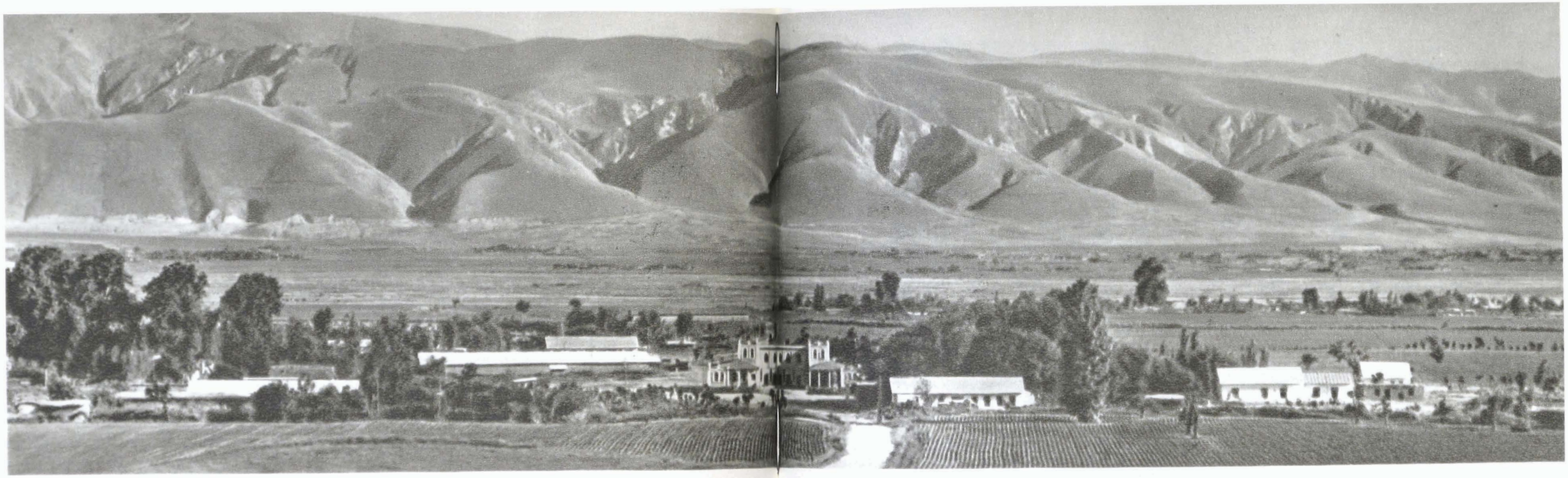
But about three kilometres before the district centre our attention is attracted by red flags fluttering on an arch at the entrance to the small lateral gorge of the river Unou.

In this gorge is the Kondara Mountain Botanical Research Station.



Cotton-harvesting machines at work

Tractor drivers of the Zargarskaya Machine-and-Tractor Station buying motorcycles at a village store



The Lenin Collective Farm, Stalinabad District. Centre: The House of Culture

The Tajik Art Decade in Moscow. The Women's Rubob (mandoline) Troupe

A field camp for cotton-growers

New cotton-harvesting machines arrive at a machine-and-tractor station

No, you will not want to leave this place until you have climbed over the slopes of this gorge accompanied by a member of the station staff.

But we must first tell you why the station was set up particularly in this place, on a spur of the southern slopes of the Hissar Range.

In Tajikistan, mountain, scrub and desert woods occupy a total area of about 1,200,000 hectares, but there are no large, continuous forests. There are few scrub woods, and they stretch only along the Vakhsh, the Lower Panj and the Syr Darya. Desert trees are represented only by saxaul in the north. Woods, consisting mainly of juniper, are met with only in the mountains, and chiefly in the northern half of the republic; juniper accounts for 48 per cent of the wooded area. Tajikistan has a larger total area of pistachio thickets than any other republic in the Soviet Union (over 200,000 hectares), but those thickets, situated in the southern, low-mountain ranges of the republic, are very sparse; usually, the trees are twenty-five to forty metres apart. About 30,000 hectares, third large in the republic, are occupied by walnut-trees, growing mainly in the narrow valleys and gorges of the Hissar, Darvaz and Peter the First ranges.

Tajikistan is greatly in need of timber for building purposes, for erecting barriers against landslides and avalanches, and also for extracting valuable chemical products, such as the resin and balsam obtained from the juniper which grow on the sides of the Kukhistan mountains.

On the southern side of the Hissar Range the maximum rainfall zone is five hundred metres lower than in the other parts of Kukhistan, and that is why the tree and shrub zone also begins much lower here. It begins at a height of 1,000 metres above sea level and continues up to 2,500 metres. Down below deciduous trees grow: small-leaf maple, dulona (or large-fruit hawthorn), Bukhara almond, nettle tree (here called "iron tree"), and rarely, pistachio. Of shrubs there is the briar, creeping cherry and puzyrnik. At a height of 1,500 metres juniper-trees begin, and in some places in the gorges Turkestan maple, apple, cherry, plum, hazel and honeysuckle. Here and there along the rivers there are birch and poplar groves, and thickets of willow. In the

numerous gorges through which run the rivers that fall into the Varzob a wild Hissar vine entangles the trees and bushes.

That is why a spot on the southern slope of the Hissar Range was chosen for the purpose of studying all this vegetation and of making scientific experiments. That spot is Kondara, the secluded, uninhabited gorge of the river Unou.

The micro-climatic conditions in this gorge are also favourable for studying cultivated fruit-trees, for plant-breeding, and for making observations of different grasses.

Here, at a height of 1,100 metres (with another centre for experimental work at a height of 1,800 metres) the Botanical Institute of the Academy of Sciences of Tajikistan set up a mountain botanical research station, headed by P. Ovchinnikov, Corresponding Member of the Academy of Sciences, a well-known student of the flora of Tajikistan and the man who trained the Tajik national cadres of biologists.

The station staff consists of a number of scientific workers who may be called botanical enthusiasts, and the work they are doing is of tremendous importance for the republic.

They are raising apple-trees grafted to the roots of the wild sterile species which are able to grow under any conditions; and they are studying many other kinds of useful plants.

On the steep mountain sides they cut terraces to retain the moisture that oozes down the mountain and gives life to the apricot orchard and vineyard laid out on the wild, dry northern slope of the gorge where cultivated fruit-trees could not grow before.

They are seeking a means of bringing together forest trees which grow isolatedly on the sides of the Tajikistan mountains. About ten years ago attempts were made in Tajikistan to thicken the woods by close planting, but nothing came of it; the trees flourished for a while, but suddenly wilted. For a long time nobody could explain why this happened and the large sums of money spent on afforestation were wasted. At last it was discovered that, in quest of moisture, the roots of the trees growing on the dry slopes spread out three or four times more widely than under ordinary conditions. Planted at what would appear to be normal distances apart, the roots of the trees interlaced

and, as it were, strangled one another. The staff of the botanical station have found new methods of tree planting and are conducting experiments at Kondara and also in other places.

The new methods of tree planting, the laying out of orchards in places where fruit-trees could not grow before, all the new varieties raised by the Michurin plant-breeders at the Kondara Station, at the Botanical Institute of the Tajik Academy of Sciences, at botanical gardens, at the State Plant-Breeding Station, at the Afforestation Station and at other institutions in Tajikistan, are being extensively employed in arboriculture and horticulture in the republic.

Many hundreds of collective farms have taken up this work. The entire population of Tajikistan, old and young, is helping to plant woods and orchards, and trees in towns and villages. To protect fields, orchards and vineyards, to protect the cotton plants from the "Afghan" dust winds which tear off the buds and even the fibre from the bolls, to prevent soil erosion and landslides and to make it unnecessary for the republic to import timber, afforestation is being carried out on a mass scale all over Tajikistan.

Already in 1949 the Kurgan-Tyube afforestation centre alone raised and planted out 2,500,000 striplings. Hundreds of thousands of trees have been planted in all parts of Tajikistan. In the republic periodical "Arbor Weeks" are held during which hundreds of thousands of people enthusiastically take part in the planting of trees.

The seemingly modest efforts of the botanical enthusiasts working in scientific research institutes and stations become a matter of great state importance when their results manifest themselves in practical measures carried out on such a gigantic scale.

In years to come the once wild and little explored Hissar Range will be entirely covered by forests.

In conformity with the plan to raise shelter belts in the low and high mountain districts of the republic, about three hundred million trees are to be planted. The task set is definite: to convert within the next few years all the plains of Tajikistan into fertile, flourishing fields protected from dry and other winds. A hundred and fifty thousand hectares of land, which hitherto have not known the shade of foliage,

will be covered with waving, rustling screens. And future generations, which will have forgotten the wars and hardships of pre-communist society, will say, when resting in the shade of the giant trees, that the magnificent, rustling forests of their bounteous country were planted by Stalin's contemporaries.

8

Splashing the sparkling water of the little river Kondara and washing its crankcase and dusty wheels our Pobeda skips on to the stone-surfaced high road, crosses the Varzob by a trusty bridge and speeds downward. Small gorges cutting through the rocky mountains flash past, one after another. In those gorges there are rest homes, apiaries and, of course, flowers. On Sundays, the people of Stalinabad drive out here to rest in this beautiful, cool, shady and secluded spot. We leave behind us the tiny town of Varzob, the administrative centre of this district.

The whole of the Varzob District is a beautiful health resort for the people of Stalinabad. Narrow, rocky gorges alternate with small valleys looking like oval dishes, and the boisterous river winds its way along its course. Born in the ice on the Hissar Range, the river, nearly a hundred kilometres long, rushes to its mouth over the rocks and boulders lying in its course and drops more than 3,000 metres; for its source lies at a height of 3,780 metres, and its mouth, where it falls into the river Kafirnigan, lies at a height of 692 metres above sea level. The force of this swift river is tremendous. Suddenly, at one of the narrows, near the kishlak Dagana which is hidden by poplar, mulberry and apricot trees, the course of the foaming Varzob is blocked by a dam which raises the level of the river three and a half metres. A little further on it rushes from a height of fifty metres through an aqueduct into the turbines of a big hydro-electric station,

That is the Upper Varzob Hydro-Electric Station, which supplies electricity for Stalinabad and the collective farms in the Varzob District. It was one of the first big industrial enterprises to be built in Tajikistan. In the building of it a million cubic metres of rock had to be

removed and twenty-five thousand cubic metres of concrete had to be laid. It was started in the night of December 31, 1936, on a bright new year eve.

At one time Diushambe was sufficiently supplied with electricity by the first power station to be built in former Eastern Bukhara in 1926—a small diesel engine station of 78 kw. capacity. Ten years later, when the Upper Varzob Hydro-Electric Station was started, the people of Stalinabad regarded its power capacity as gigantic. But soon this station, one of the largest at that time, proved to be inadequate for the needs of Stalinabad, and thirteen years later, in 1949, the Lower Varzob Hydro-Electric Station was opened. Compared with it, the Upper Varzob station looks a pigmy. This station is built on the very outskirts of the city, it works automatically and is telecontrolled.

Here in Tajikistan with its abundant water-power resources Lenin's great idea of electrification is being put into practice at a tempo that is possible only under socialism.

A vast number of industrial, municipal and collective-farm hydro-electric stations have been built in Tajikistan. In 1940 there were forty-four times as many as there were in 1928; total power capacity had increased 73-fold and the amount of electricity produced had increased 240-fold. During the pre-war five-year plan periods the amount of electricity supplied to the industry of the republic increased more than fourfold.

So many new industrial plants and dwelling-houses are being built in the republic, and the collective and state farms are so much in need of electricity, that the above figures will seem insignificant when all the new power stations planned for the next five years are built. And they are being built everywhere: in the narrow gorges, and under the crests of the highest mountains.

Even in Pamir, the "roof of the world," on the map of which there were large "blank spaces" only twenty years ago, there are, in addition to the powerful Khorog station, quite a number of collective-farm hydro-electric stations.

Immediately beyond the Upper Varzob Hydro-Electric Station the gorge opens out wide. The Hissar Range, spreading out its gigantic

granite paws, releases the river which runs swirling between its rocky banks. Lower down it becomes the Diushambe Darya, and clearing for itself a broad, terrace-bordered bed in the foot-hills, it flows almost peacefully into Stalinabad. The road runs along a smooth flat terrace and ahead of us we can already see the green massif of a large city interspersed with white colonnades and porticos. We dash past the grey buildings of the cement works, the northern outpost of the capital. On the slightly undulating hill on the left a little narrow-gauge engine hauling several cars is running towards us. On the right a derivation canal stretches towards the lower terrace of the river below the steep bank of which we see the equalizing tower of the Lower Varzob Hydro-Electric Station.

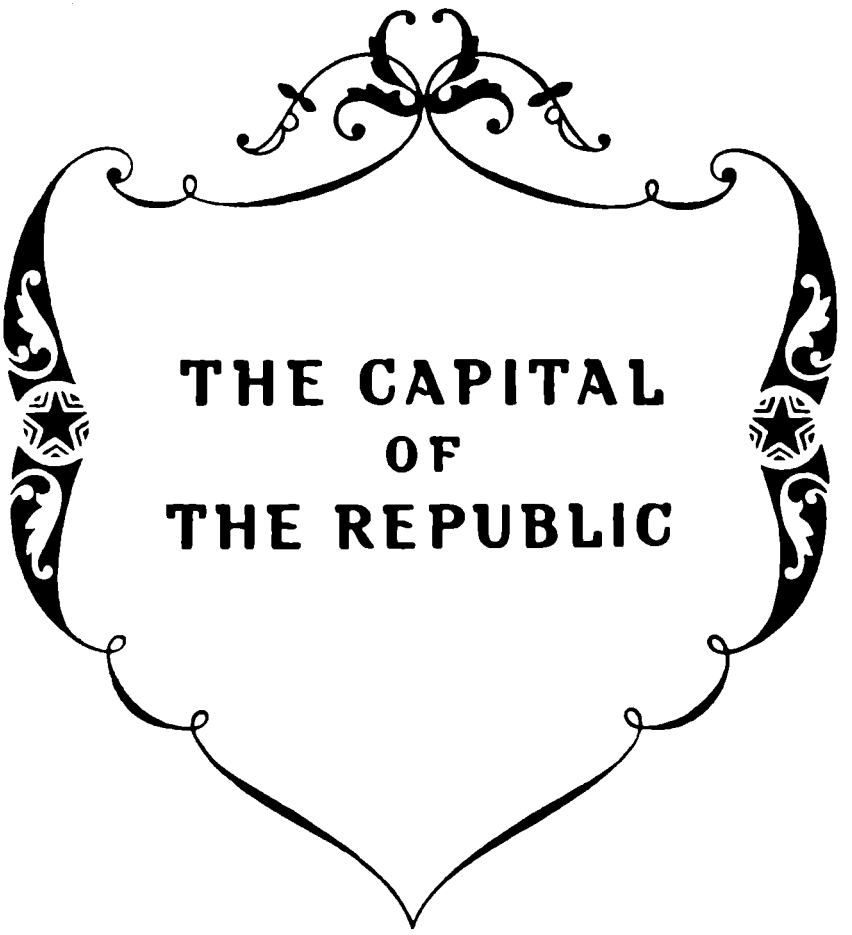
The Lower Varzob Hydro-Electric Station was built by V. Karamov. And pointing to the train, the women who are working in the wheat field nearby cry out cheerfully "Karamov omad!" ("Karamov has arrived"), for Karamov built the railway too.

Everybody in Tajikistan knows Karamov. Of Armenian nationality, he has devoted his life to Tajikistan. He was formerly a fitter, working at the Kizyl-Arvat railway workshops, and is now a great builder. Well over middle age and of stocky build, he possesses extraordinary energy, and the popularity he enjoys in Tajikistan is understandable. It was this Karamov who on September 10, 1929, drove the engine of the first train to arrive in Diushambe—the "kishlak capital." It was he who directed the extremely difficult operations in laying the Pamir section of the Stalinabad-Khorog motor road. The whole of this road across gigantic mountains was laid under the direction of A. Mazayev, and the work was done in a hundred and ten days. To bore the blast holes in the almost perpendicular rocks the men had to be lowered by ropes, and hundreds of men at a time were suspended over the precipice boring the rocks. On some days as many as five thousand blasts were made. The entire Darvaz Gorge rumbled as if during a severe earthquake. Karamov directed the laying of the road from Khorog, and that from Stalinabad was laid under the direction of Mazayev. On September 6, 1940, they met at a point between Pshikharv and Dashtak.

This same tireless Communist Karamov directed the building of most of the big motor roads in Tajikistan, of hundreds of kilometres of narrow-gauge railway, and of high-mountain bridges. Beloved by the workers and collective farmers, bold in his methods of building, an innovator not afraid to take risks—such is Vagarshak Javadovich Karamov, about whom an interesting book could be written. There he is in his car, riding towards us, sunburnt and cheerful as ever. He stops his car, waves his hand, and in his stentorian voice invites us to visit him.

But not today. The last kilometre of the great road through Kukhistan is being laid. Ploughed wheat fields stretch far and wide, the valley opens out and we come upon a new suburb with numerous slate and tile roofed houses built only in 1951-52. We pass through the suburb, and on the right spread the wings of the Medical Institute building. Behind it stretch the Botanical Gardens, and on the left stand the two-storey cottages of the students' settlement.

We drive through a shady avenue of tall poplars. That is Lenin Street, which leads to the centre of Stalinabad, the flourishing capital of Tajikistan.


THE CAPITAL
OF
THE REPUBLIC

1

STALINABAD is a beautiful city set in luxuriant parks and gardens situated on the steep terrace overlooking the floodlands of the river Diushambe Darya and surrounded by the magnificent snow-capped mountains of the Hissar Range. But it is not only its surroundings and its luxuriant gardens that make the city beautiful. It is beautiful mainly because of the great harmony of its plan, because of the fine architecture of its public buildings and dwellings, because of the wide straight streets which divide it into regular blocks, bordered by tall trees—plane, maple, acacia, thuja, poplar, willow, mulberry and elm. Many of these streets cannot even be called avenues, for the tree branches, interlaced over the asphalt, convert them into shady arcades, through the leafy roofs of which the hot sun barely penetrates.

The main street runs right through the city from its south to its north end. That is Lenin Street. Only in the middle section of this street is there an unshaded part, where the young trees, which were planted after the asphalt road was widened, have not yet interlaced their branches with those of the twenty and twenty-five-year-old trees.

Scores of transverse streets run through the city from the river embankment to the edge of the foot-hills of the mountains. Short, not exceeding half a kilometre, in the northern part of the city where the valley of the Diushambe Darya is narrow, they grow longer and longer as the valley widens reaching a length of three and a half kilometres;

and finally, in the southern part of the city nearer to the railway station, they become sections of the roads which, parallel with the railway, run out of the city along the Hissar Valley, eastward, to the city of Orjonikidzeabad (formerly called Yangi-Bazar), and westward, to Hissar, Shakhrinau and Regar.

Running parallel with the main street, in the middle part of the city, there are a number of streets, which are also green arcades, with irrigation ditches between the road and the pavement, and lined with one- and two-storey houses surrounded by gardens.

The city is rightly called Stalinabad, because only Bolsheviks could dare to build the capital amidst the flying bullets of the Basmachi at a time when the nearest railway was two hundred and fifty kilometres away; and also because, built according to a deeply thought-out plan, it has become a real socialist garden city, and with every year of new construction is becoming a single, magnificent architectural ensemble moulded by the whole of the surrounding landscape.

There is deep meaning, however, not only in the form, but also in the content of its construction.

At the time the building of the capital was planned the old, half-ruined kishlak Diushambe consisted only of two score or so of wretched adobe hovels and had a population of two hundred. But the Bolsheviks calculated that already by the end of the third five-year plan period the population of Stalinabad will have grown to a hundred thousand, and that their mode of life will be socialistic. A general plan for the building of the city was drawn up, taking into account the requirements of the future inhabitants. The south side of the area on which the city was to be built was set apart for the industrial district; the railway was to pass through here; and from here the motor roads would radiate in all directions. Hence, all the principal enterprises had to be built here. But some of these enterprises would be harmful for the residential quarters because of the smoke from factory chimneys, the clang of metal, the noise of freight traffic and other inconveniences. It was therefore planned to build the meat-packing plant, the cotton (now textile) combine and the fruit-canning plant two or three kilometres away from the general industrial district.

It was decided to create in the middle section of the capital, on the spacious left-bank terrace, a centre for the government buildings and administrative offices of the republic.

The north side, the elevated and best section of the left-bank terrace overlooking the river, was set apart for an educational centre, where in the pure air and quiet and shady gardens thousands of students would live and pursue their studies in comfort.

Still higher up, nearer to the foot-hills where the air is exceptionally pure and healthy, it was decided to build hospitals and medical colleges, and to lay out a botanical garden. Agricultural colleges were to be built along the river in the same area, but nearer to the state farms and suburban vegetable farms.

And there were to be green belts everywhere, in all the districts of the city.

That is how the capital of Tajikistan was planned, and that is almost how it was built.

At first the city occupied the area of the kishlak Diushambe. Later, flourishing and expanding, it caught in and re-shaped other former kishlaks—Shakhmansur in the south, and Sary-Assia in the north. Their flat roofs and dusty, narrow streets still stand out in drab, desert-coloured patches amidst the greenery of the city. But every year the number of old houses and crooked streets grows less; their place is taken by new streets and blocks of gardens and houses harmonizing with the general ensemble of the socialist city.

The first part of the plan of construction was carried out long ago. The city is now developing in conformity with the second plan. The river Diushambe Darya is, as it were, gradually shifting almost to the middle of the city. One of its wide streets runs across a magnificent bridge to the right bank. There a big stadium has been built with a seating capacity of many thousands. The Dynamo Stadium and the other minor stadiums became too small for the growing sports activities of the Stalinabad people. On that right bank the Stalinabaders have also dug a large lake, called Komsomol Lake; it is bordered with trees, it has a fine beach, and it is equipped with all that is needed for swim-

ming, diving, boating and other aquatic sports. A new park is already providing shade where not so long ago there was only a sun-scorched waste lot. The beautiful head structure of the Hissar Canal directs part of the swirling water of the Diushambe Darya westward, to the collective farms in the Hissar Valley. In the near future the river will be encased in granite embankments, stone steps will lead down to the water, and around the new buildings along the embankments there will be flower-beds and avenues. The part of the city on the right bank of the river has already reached out to the suburban collective farms and villages.

In Stalinabad there are over ten thousand houses. Every year new dwelling-houses of beautiful architecture are made available for occupation. Recently, Kuibyshev Street joined up with Nizami Street; it consists entirely of two-storey houses built for their workers and office employees by the management of the Textile Combine. These houses are not only pleasing to the eye, but contain well-appointed, comfortable apartments provided with central heating and hot and cold water.

Within the next few years a number of special buildings will be erected for various institutes, such as the Geological, Agricultural, Teachers', Industrial, Art and Physical Culture Institutes, the Institute of Journalism, and also a House of Artistic Training, a Teachers' House, and Engineers' and Technicians' Club.

Around Station Square will be erected the three-storey buildings of the Industrial Technical School and Railwaymen's House. The square is to be reconstructed, and through it will run the Hissar Canal. The canal will run parallel with the high road from Orjonikidzeabad to the capital, through its eastern part, where its banks will run parallel with the boulevards that will be laid out along the buildings of the Academy of Sciences and of a half a dozen scientific research institutes now in course of erection.

That section of the city, the architectural ensemble of which will include the granite embankments and smooth water of the new, wide canal, will be one of the most beautiful districts of the capital. Here there will be a park, rows of shops, hotels and cinema theatres.

Within the next few years a Zoological Garden with canals and ponds, a Palace of Socialist Culture, a Planetarium, a House of Young Pioneers, a new State Dramatic Theatre, a Conservatory, a School of Music, a Theatrical School, a Fine Arts Museum and many other new buildings set in gardens with fountains and ponds will arise in different districts of the city and enhance its magnificence and beauty. The recreation park, which already occupied a large area, will join the park of the Army Officers' House, stretch along the whole of the embankment of the Diushambe Darya and adjoin the grounds of the Hippodrome and the Aquatic Sports Stadium. Marble and granite stairs will lead to the floodlands of the river.

As in all things the great Russian people are rendering fraternal, vigorous and unselfish assistance in the development of the Tajik capital. And the Tajik people honour the names of those splendid Russians who have spared no effort, or even their lives, to help to revive and develop Tajik national culture. A square and a street in the capital have been named after that famous son of the Russian people Putovsky, who fought fearlessly for the triumph of Soviet rule in Tajikistan.

A street and the Hydro-Technical School in Stalinabad, and a railway station have been named after the engineer Sviridenko who arrived in Tajikistan immediately after he left college and spent his whole life there in construction work. He was Chief Engineer in the construction of the Tajik section of the Great Ferghana Canal; and he built the Hissar Canal and the narrow-gauge railway.

Many Russians, Communists, and non-party people, loyal friends of the Tajik people, have devoted all their lives to them, helping them to achieve victory in the fight to establish Soviet rule, and helping them also in peaceful construction.

2

Diushambe was a secluded town which had existed several hundred years. Adjoining the town was the kishlak Makhau, inhabited by lepers. The lepers roamed unhindered through the narrow crooked streets of

the town and mingled with the crowd in the bazaar. The town teemed with religious fanatics. The houses of the beys were mere gambling dens. Executions frequently took place, and the sarbazis (soldiers) used to lead the condemned through the bazaar and make money even out of that spectacle.

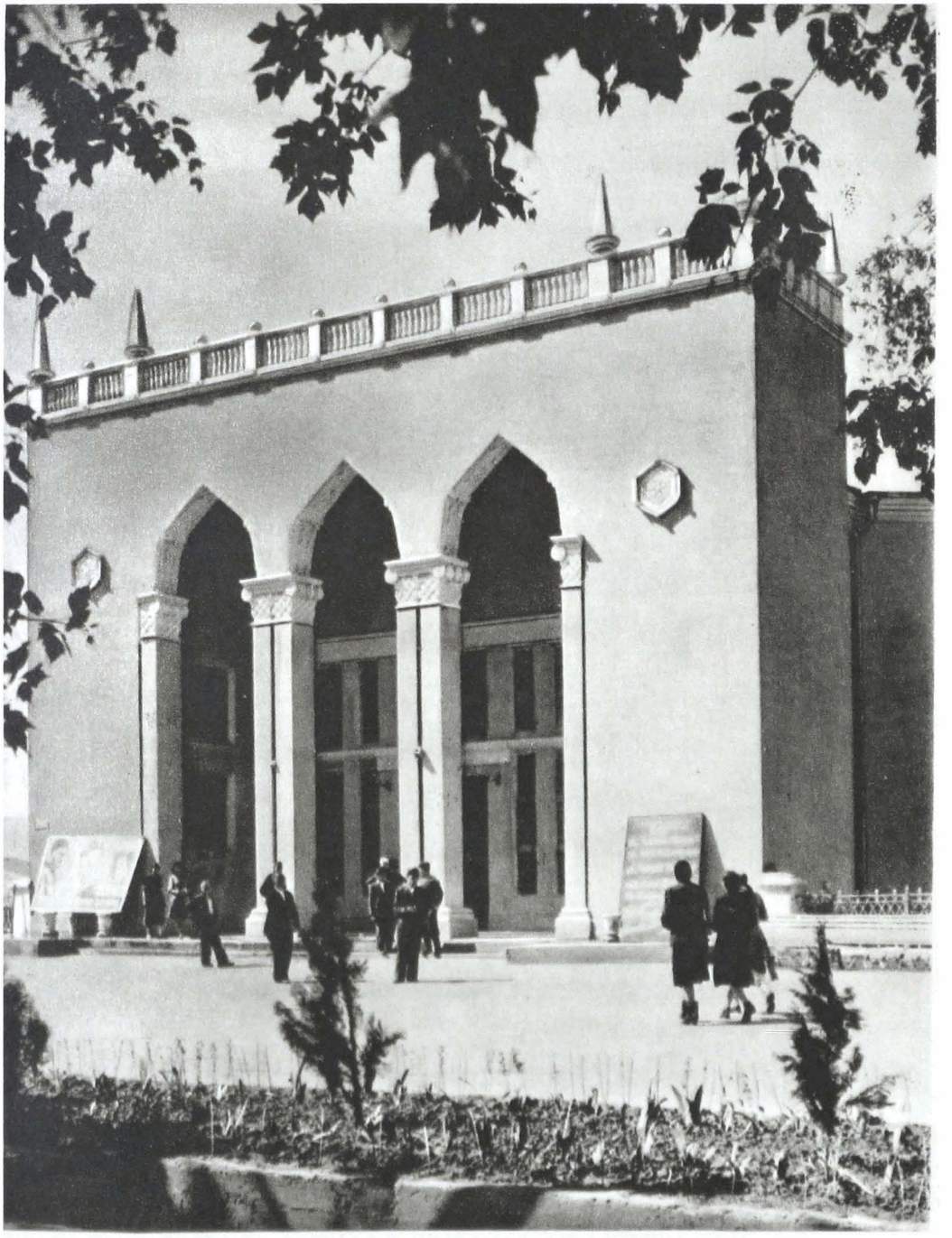
Such was this town when it became the residence of Emir Seid-Alim-khan, who fled here from the Red Army and the insurgent people of Bukhara.

When the Bukhara group of the Red Army liberated Diushambe finally and for ever, there was really nothing left of the ancient kishlak. Wrecked by the Basmachi, it consisted only of ruins, sheltering a few score of sick and starving inhabitants.

The City Executive Committee that was set up began to build the "kishlak capital" on what was literally a vacant site. Of the gardens in the town only three ancient plane-trees remained. Hundreds of Russians came to help to build up Soviet life in the town. A public dining-room, a hostel, a dispensary, a small hospital and three elementary schools for a hundred and twenty children were opened. But there was hardly anybody to teach these children, so three-month courses were conducted at which twenty-eight Tajik school-teachers were trained. A state publishing house was established, and soon after the Tajiks saw the first books published by it.

Caravans of camels, guarded by Red Army men, wended their way across deserts and mountains to Diushambe, carrying agricultural implements, food, manufactured goods, medicaments and building materials.

More and more often geologists, geographers, botanists and livestock experts visited the town. Scientists began to introduce measures for combating malaria and agricultural pests. There were already hundreds of skilled workers in the town. Nineteen tractors, the first to appear in the republic, rattled through the dusty streets. Those tractors were sent by the Russian people. The First Five-Year Plan came into operation. In 1929 there were 353 schools in Tajikistan. Nearly two thousand Tajik workers and peasants were sent to study in Diushambe and other towns. In Diushambe there was a Teachers' Training

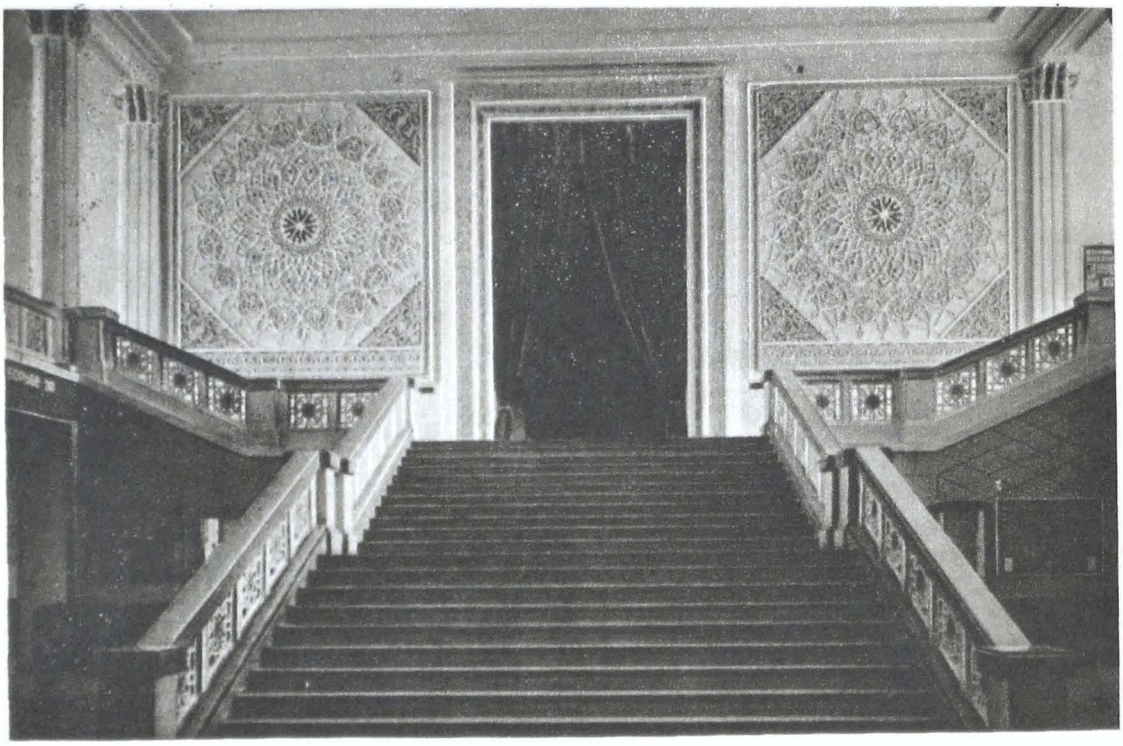


The Vatan (Motherland) Cinema Theatre, recently built in Stalinabad

Moscow Square, Stalinabad

A new apartment house in Lenin Street, Stalinabad

Aini Street, a new street in Stalinabad



Entrance to the hall of the Tajik Opera and Ballet, Stalinabad

"Othello" on the stage of the Stalinabad Dramatic Theatre

School. By that year, the year in which the Tajik Soviet Socialist Republic was formed, Diushambe had already become a big organizing centre, the point of concentration of the whole political, economic and cultural life of the Union Republic. And the Tajik people decided to re-name their capital Stalinabad.

At the present time Stalinabad is a big industrial centre. Among the industrial enterprises in the city are the Kuibyshev Cotton-Ginning Mills, a silk-winding and weaving mill, a meat-packing plant, a tannery, a cement works, a brick and tile yard, a clothing factory, the Avtotraktordetal Plant, where parts for automobiles and tractors are made, the Orjonikidze Engineering Works, the Kirov Automobile Repair Works, a winery, and a tobacco factory. Nearly all these enterprises are equipped with first-class, up-to-date machines, lathes and mechanisms of high output capacity. The pride of the city is the Textile Combine, which occupies a large area on the lower terrace of the river.

In addition to the dwelling-houses which occupy the whole of Nizami Street in the central part of the capital, the mill management has built for the work people an entire village adjacent to the mills. Here there is a stadium, a factory apprenticeship school, a polyclinic and day nurseries. On the other side of the river, next to the magnificent park and the tree and flower nurseries, the best Stakhanovites, workers and foremen, have their own well-appointed two- or three-room cottages. These were built in six weeks, a time so short that even the Stalinabaders, who are used to quick work, asked themselves in astonishment how these neat cottages suddenly sprang up in one of the most beautiful parts of the city.

Following the example of the Moscow weaver A. Chutkikh, over a hundred teams at the mills are emulating each other in producing goods of excellent quality, in saving raw materials, and in maintaining cleanliness and good order around their machines. Inventors and rationalizers—workers, foremen and engineers—systematically introduce the latest technical devices and improve the first-class machines which have replaced the old machines in all the shops. Leningrad, Tashkent, Oryol and other cities are emulating each other in turning out the most ingenious, precise and fastest looms and other machines,

and these find their way to the bright, spacious shops of the Stalinabad Textile Combine.

Thanks to the fraternal assistance of the experienced Russian workers, the Tajik cadres of highly skilled workers, foremen, technicians and engineers, are steadily multiplying in the industrial enterprises in Stalinabad. The workers of Stalinabad and Leninabad are in the van of the large army of industrial cadres of the Tajik Republic. The goods produced at their factories and mills are becoming more and more widely known throughout the Soviet Union.

3

But Stalinabad is not only a big industrial centre, it is also the biggest centre in the republic of education, science, art, literature and the press. What a number of cultural institutions can be seen when taking a stroll only down Lenin Street, the main artery which runs almost through the entire city from Station Square to the Medical Institute!

Along Lenin Street the trees are planted in six and eight rows, separating the two strips of asphalt, the irrigation ditches and the sidewalks of this magnificent street. It brings us to the centre of the city and here, with outspread wings, as it were, stands the white, two-storey building of the Academy of Sciences. Beyond it the Kuibyshev Prospect joins the street. Here, on the left, on what was formerly mere waste ground, two rows of three-storey houses stretch into the distance, and on the right, on what was formerly the Diushambe refuse dump, the magnificent Moscow Square spreads out before you. It inclines to the right from the cross-road, on the corners of which, their architecture fitting in with the entire ensemble, stand the three-storey buildings of the City Hotel, the State Bank, the Ministry of Agriculture, and the new apartment house for scientific workers.

The western side of the square is formed by the façade of the magnificent building of the Order of Lenin State Opera and Ballet. This building also houses the State Philharmonic Society which has been awarded the Order of the Red Banner of Labour.

In the middle of the square there is a group of fountains which throw up scores of intercrossing and disintegrating sprays and cascades, reflecting in the sun all the colours of the rainbow. Through them can be seen the white crests of the Hissar Range. The granite and marble fountain basins are surrounded by flower beds. Broad stairs lead from them to the boulevard of Lenin Street.

The Opera and Ballet, with its vast auditorium, spacious foyer and minor halls, is one of the most capacious buildings in Stalinabad, and that is why all the most important all-republic congresses and all the most solemn gatherings are held in that building.

The Stalinabad Opera and Ballet is the largest of the nine theatres in Tajikistan. Together with the Lakhuti State Dramatic Theatre, the Russian Mayakovsky Dramatic Theatre, and the other best theatres in the republic, it is the pride of the Tajik people.

Until 1929 there were no theatres in Tajikistan. In 1929, the first Tajik dramatic troupe was organized at the House of Dehkans (a hostel and cultural institution for Tajik peasants). Four years later a musical troupe was organized. Later the two troupes were united in the Lakhuti State Theatre.

Formerly Tajikistan had no opera, ballet or regular dramatic plays. The gifted Tajik people did not know how to clothe in those forms their ancient arts of singing, instrumental music and dancing.

Russian composers, artists and writers who visited Stalinabad remained there to collect and unite the young Tajiks working in their respective professions, to share their experience with them, to help them to bring out and develop their talent and to convert the gifted amateurs found among the collective farmers in the republic into professionals endowed with all the wealth of the modern theatrical culture.

In the course of the first ten years of existence of the Tajik Soviet Socialist Republic the Tajik people created their own opera, ballet and drama. Considering that the Tajik people had no theatre at all in the past, it must be admitted that this was gigantic progress for such a short period.

The Tajik State Philharmonic Society also developed. Expeditions of the most outstanding workers in the field of art were sent from Stalinabad to all parts of the republic—to the Ferghana Valley in the north, to the Vakhsh and Darvaz Valleys in the south, to Karategin in the east and into the highest of the Pamir Mountains—to choose the most talented amateur and professional performers at local art reviews. And there was not a kishlak in the republic in which capable singers, dancers and musicians were not found. The best of them went to Stalinabad and remained there to engage in their art. That is how the Tajik Song and Dance Troupe, the Pamir Ethnographical Troupe, the Women's Rubob Troupe,* the Folk Instrument Orchestra and the Pamir Juvenile Song and Dance Troupe were formed.

In the spring of 1941 a Tajik Art Decade was held in Moscow. That was a festival for the whole of the Tajik people. The plays and concerts performed during the decade were attended by leaders of the Party and of the Government, and they were a tremendous success.

From that time onward the national art of the republic advanced more and more confidently and successfully. Tajik artistes acquired wider and wider fame. In 1941 a group of Tajik artistes, headed by M. Tursun-Zade, visited Iran. On the outbreak of the war a theatrical company was formed to give performances before the armed forces at the front. Later a concert group of Tajik artistes was formed and gave concerts for the troops on the Leningrad, Volkhov and Central fronts. The splendid performances of the Tajik artistes inspired the troops who were preparing to break the siege of Leningrad.

After the war Ashura Nasyrova, a talented dancer who had given performances at the front and was later awarded the title of People's Artiste of the Republic, was one of the representatives of Soviet national art at the International Democratic Youth Festival in Prague. The people of the Czechoslovak Republic gave their Soviet guests an enthusiastic welcome. Ashura Nasyrova, daughter of a wandering tight-rope walker, daughter of a Tajik mother who until recently had covered her face with a paranja, earned the admiration of the numerous represent-

* Rubob—a pizzicato instrument.—*Tr.*

atives of many countries at the festival. In 1952, the talented dancer was awarded a Stalin Prize.

The Tajikistan theatres give performances of Russian classical ballet and Russian opera, of Shakespeare's tragedies, of the plays of Ostrovsky, and of the plays of Tajik dramatists which are being written in increasing number.

The repertoires of the Opera and Ballet, and of the Lakhuti and Mayakovsky Theatres, contain scores of the best classical and modern Soviet plays.

For her performance of Leyly in the ballet "Leyly and Medjnun" Lyutfi Zakhidova, a native of Kanibadam, the youngest People's Artiste of the Tajik S.S.R. and Young Communist League member, was awarded a Stalin Prize.

For their presentation of "Leyly and Medjnun" Stalin Prizes were also awarded to balletmaster G. Valamat-Zoda, scene artist E. Chemodurov, and the vocalist Mahmat Kabilov, who was born in Khovaling, the son of a dehkan.

One of the best opera singers who has come to the front in recent years is Khanifa Mavlyanova, who plays the leading feminine roles in "The Queen of Spades," in "Prince Igor" and in other operas presented by the State Opera and Ballet.

Scores of theatrical performers enjoy the titles of People's Artiste and Merited Artiste. They are known and admired by the entire Tajik people. They frequently visit collective farms, give performances in the cotton fields, and invariably take part in collective-farm festivals. Concert performances are a feature of every congress, of every important event in the political and social life of Tajikistan, no matter where it takes place.

The Tajik people sing, dance, play on string instruments and flutes together with the professionals, with the best representatives of the art they have created under the Soviet regime.

In the eighties of the last century the Bukhara scholar Ahmad Donish (Kalla) after a stay in St. Petersburg returned home to the Khanate of Bukhara and with aching heart dreamed of creating a national theatre. He fully realized that under the conditions prevailing

in his time his dream could not come true. In Tajikistan today there are nine theatres, at which there are over five hundred artistes. And there are also what Ahmad Donish could not dream of, dozens of Palaces of Culture and cinema theatres, and hundreds of recreation clubs and cinema installations.

4

Nearer to the centre in the middle of the next block in Lenin Street there is a statue of Stalin, a beautiful fountain and flower beds. Behind them rises the building of the Central Committee of the Communist Party of Tajikistan. Further on stands Press House, occupied by the State Printing Plant and State Publishing House, the Chamber of Books, and the editorial offices of the newspapers *Kommunist Tajikistana* and *Tajikistoni Surkh* (*Red Tajikistan*) and of the magazine *Sharki Surkh* (*Red East*). Seven newspapers and six magazines are published in Stalinabad, and nearly all have their editorial offices in Press House.

On the other side of the street stands the yellow, semi-circular building of the Stalinabad Cinema Studio, which has to its credit several full-length films and also newsreels which have become world famous, such as the film "Tajikistan," which was awarded a diploma at the International Cinema Festival in Venice.

The whole of the next block consists of big buildings of beautiful architecture, and the trees outside them even reach the balconies of the third floor. At the end of this block where formerly a cemetery had marked the outskirts of Diushambe, in the very centre of the city, is the spacious Soviet Square, in which there is an obelisk bearing the State Emblem of the republic. On the left stands the massive building of the General Post Office. On the right, on what was only recently a waste plot, stands Government House, the premises of the Supreme Soviet and the Council of Ministers of the Tajik Republic. It is the largest and most beautiful building in Stalinabad. Opposite, across the square, in one of the oldest Soviet buildings in the capital, is the Firdousi State Public Library which, in addition to a vast fund of books, contains a most valuable collection of manuscripts. This building is too

small for the library, and before this book appears, perhaps, a new big building will be completed to house the one and a half million books of this, the best book repository of the republic.

Still further on is the beautiful building of the Union of Soviet Writers of Tajikistan, which unites the whole of the literary life of the republic.

Until 1930 there was no Soviet literary organization in Stalinabad. At that time the young and still inexperienced Soviet Tajik writers, learning from Sadriddin Aini, and from the Russian writers who came to Tajikistan, had only just started on their literary career, which promised so much success in the future.

In 1925 Mirzo Tursun-Zade walked from Karatag to Diushambe to enter a children's home and to get some education. He remained in Stalinabad, and there wrote his first verses. A year before Stalinabad was established, the youth Mirsaid Mirshakar arrived on horseback from the remote Shakh Darya Gorge in the Pamirs.

Tajik poetry had rich traditions inherited from the great classics Rudagi, Firdousi, Saadi, Omar Khayam, Hafiz, Jami, Bedil, Saido Nosafi, Nosyr-i-Hosrou and Kamol Hujendi. The young writers read and studied those classics which opened a new world for them.

On learning Russian they discovered the genius of Pushkin, read and re-read the works of Lermontov, Tolstoy, Herzen, Chernyshevsky and Chekhov, and admired the greatness of their contemporaries Maxim Gorky and Mayakovsky.

In those years the first translations into Tajik of the best products of Russian literature began to appear.

Breaking down the conservative traditions of the feudal literature and eliminating all that was alien to the spirit of our Soviet times, the young Soviet Tajik literature made rapid strides forward. Enormous assistance in the development of this literature was rendered by S. Aini and A. Lakhuti and, of course, by the newspapers which united all the writers and published all the best of their productions.

The first congress of the Union of Soviet Writers of Tajikistan, which was held in Stalinabad, adopted a clear and purposeful program of action and ideologically united all the writers. From

then on, mastering the method of Soviet realism, Tajik Soviet literature achieved important successes, which were summed up at the second congress of Tajik writers held after the Great Patriotic War.

Nation-wide confirmation of the efflorescence attained was provided by the Tajik Literature Decade held in Moscow in 1949.

One of those who attended the Decade was the great Tajik poet Mirzo Tursun-Zade, who had already acquired all-Union and world fame, and was the first Tajik to receive a Stalin Prize. His "Indian Ballads," written after a visit to India, have been translated into many of the languages of the peoples of the Soviet Union and also into foreign languages. He, the son of a Karatag carpenter, has represented the mighty Soviet Union not only in India, but also in Iran, and in Warsaw, Paris and Berlin. His voice has been heard all over the world.

Many other poets, dramatists, prose writers and critics took their works to the Decade, and among them were representatives of the new generation of young writers who had come out after the war.

Unanimous recognition was accorded to two volumes of *Memoirs* (in Russian translation published under the title *Bukhara*) by Sadriddin Aini, whose exceptional talent developed before the revolution, in spite of the severe conditions under which the Tajik people lived at that time.

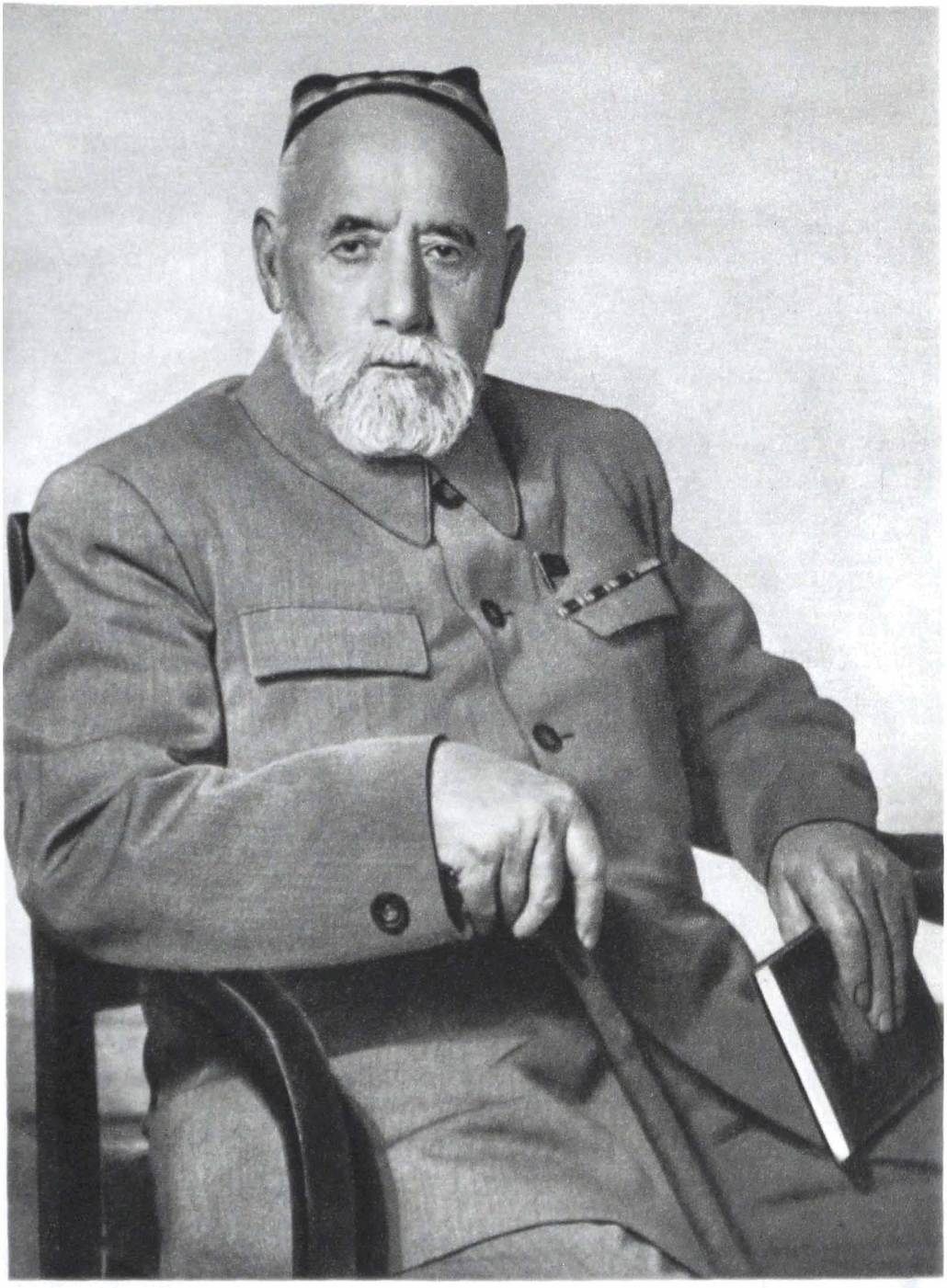
Sadriddin Aini's whole life and literary career is worthy of the closest study and the highest respect, for Tajik prose had scarcely any past models to follow.

He was born in 1878 in what was then the remote kishlak Soktar, in the Gizhduvan District of the Bukhara Region. His father was a peasant of moderate means. At the age of eleven, having lost his father and mother, he had to earn his own living.

Later, while studying at a madrasah in Bukhara (at the same time serving as a watchman) he eagerly studied the Oriental classics and mixed with musicians, bards and experts in the popular arts and crafts. He began to write poetry, and later, prose.

In 1917 the Emir's executioners put Aini's younger brother to death, and Aini himself was flung into prison. By the Emir's orders he was given seventy-five strokes on his back with a rod. The Russian revolutionary troops liberated Aini from the Emir's dungeon. In broken

Tursun-Zade Mirzo, Tajik poet



Aini Sadriddin, founder of Tajik Soviet literature

health and in need of a long cure he went to Samarkand where he lives to this day.

Aini welcomed the October Revolution with his rapturous *March of Freedom*, the first Tajik Soviet literary production.

And it was only the October Revolution that opened for the writer the possibility of freely mixing with the representatives of Russian culture and of studying Russian literature.

The traditions of Russian literature helped to develop the remarkable talent of the first prose writer in Tajik Soviet literature.

Odina, Or the Adventures of a Poor Tajik; *The Death of a Usurer*; *Dokhunda*; *Slaves*; *Bukhara* (*Memoirs*), and many other realistic works by Aini, written in beautiful, simple and expressive language, unfold for the reader the entire history of Tajikistan, all the hopes and aspirations of the freedom-loving Tajik people, their fight for liberation and national independence, their triumph over the forces of oppression and ignorance, their entry, with the aid of the great Russian people, into the friendly family of Soviet Socialist Republics, and finally, their present efflorescence, achieved as a result of the Lenin-Stalin national policy.

Seventy-five years old, now President of the Tajik Academy of Sciences, Doctor of Philology, scholar, poet, prose writer, and thinker, a Stalin Prize winner, Aini is in himself a living witness to the enormous benefits the Great October Socialist Revolution brought the Tajik people. Julius Fučik, the hero of the Czechoslovak people, who visited Tajikistan in 1939, aptly said of Aini:

"Aini is not only your writer but also our writer. His books are not only examples of fine art, but also text-books. Those books not only portray the past sufferings and the new achievements of the Tajik people; they are in themselves living proof of those achievements. And that is why those books are a direct aid to us in our struggle for the world revolution."

Besides the Union of Soviet Writers, there are in Tajikistan a number of other public organizations which unite workers in the field of art. Among these are the Union of Soviet Composers, the Union of Soviet Artists, and the Union of Soviet Architects.

5

Beyond Soviet Square runs Lenin Street, with its maple and plane trees. Adjoining it is the spacious recreation park. Opposite the park stands the State Historical and Regional Studies Museum, and further on the buildings of numerous other institutions.

The central part of the city ends with Putovsky Street. Beyond it are the beautiful buildings of the Pedagogical Institute, schools and colleges, the Green Theatre (open air), and the young people's cinema theatre built by members of the Young Communist League. This line of buildings ends up with the Medical Institute, a huge building, but of light and graceful architectural design. Its northern wing seems to spread over the grain fields of a collective farm, beyond which, high above the Diushambe Darya, stretch the Botanical Gardens. In the spring students come here to prepare for their examinations. It is quiet here, and the fragrant air is reposeful. The snow-capped summits of the Hissar Range seen through the foliage seem to be quite close.

In the Tajik Republic there are sixteen thousand teachers; and there are over three thousand schools, attended by three hundred thousand children. The number of Tajik children who finished secondary school in 1952 was five times as large as in 1948. Five of the nine higher educational establishments in the republic and thirteen of the thirty technical and special schools are in Stalinabad. First place among them is held by the Tajik State University which was opened in September 1948. It is attended by hundreds of Tajik, Uzbek and Russian students, future chemists, physicists, astronomers, mathematicians, coal, oil and ore mining experts, petrographers, mineralogists, palaeontologists, hydrogeologists, soil scientists, cartographers, climatologists, historians, archaeologists and linguists. Many of the students who will graduate from the biological department will work at the biostations, zonal stations and reservations in the Vakhsh and Pamir mountains.

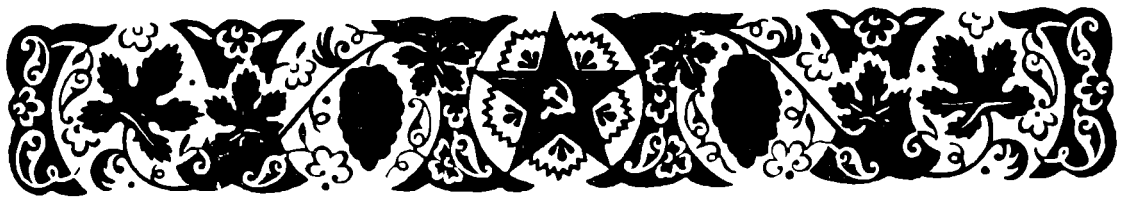
The population of Tajikistan is only a fraction of the population of the adjoining country Afghanistan, but the number of elementary, incomplete-secondary and secondary schools in Tajikistan is ten times as large as in Afghanistan; and the number of technical schools and col-

leges which train specialists for industry, agriculture and cultural occupations is fifteen times as large. In the past three years the number of college students in Tajikistan has doubled.

Within the next few years the State University and the other colleges in Tajikistan will solve one of the most urgent problems affecting the further development of the republic, namely, the training of national cadres of scientific specialists.

Thus, with the fraternal assistance of the Russian people, the national culture of the Tajik people is steadily rising to a new stage.


THE HISSAR
VALLEY



1

THE HISSAR Valley, seventy kilometres long, stretches from east to west between the Hissar Range and the low ranges which separate Central from Southern Tajikistan.

Not so long ago large parts of the valley were uninhabited. Bogs, overrun with reeds, were the haunts of wild boars, jackals, birds of prey, and even of tigers. The noxious breath of the bogs poisoned the entire valley. The inhabitants of the numerous kishlaks in the habitable parts suffered cruelly from the wild animals, from tropical fever, papatach, and from stomach diseases.

In the reign of the Emirs the local aristocracy, the bek officials, and the rich beys, left their kishlaks in the summer and went to live in the mountain gorges, to Karatag and other towns and kishlaks in the foothills. The poverty-stricken dehkans had nowhere to go. Left to their fate, many of them fell sick and died.

At the present time the whole of the Hissar Valley, from east to west, is a flourishing oasis, entirely covered with collective-farm cotton fields. The bogs have gone; they were drained, and their soil, ploughed by hundreds of tractor ploughs, proved to be the same fertile loess that covered the whole of the valley. An ingenious network of canals forming a single irrigation system provides the fields with all the water needed for raising splendid crops. The Molotov Great Hissar Canal, dug by thirty thousand collective farmers during the Great Patriotic War, revived over eight thousand hectares of land which for centuries had been dead and bare.

The inhabitants of the valley are now leading a peaceful and healthy life, for the climate here is good.

Many scores of rich collective farms, joining the imperceptible borders of their fields, enjoy the advantages of nearness to Stalinabad, the capital of the republic, and to the railway which runs through the Hissar Valley on the way from Termez, through the capital, to Orjonikidzeabad. The city and the collective farms are linked together by thousands of ties of personal and business friendship, of cultural and economic relationships.

There is not a season in the year when the fields in the Hissar Valley are not buzzing with joyous, collective labour. Long forgotten is the time when the dehkans in the valley, exploited by the beks and beys, and in slavish toil tilling other people's fields, thought of only one thing—how to throw off this unbearable yoke and yet avoid landing in the Emir's dungeons or dying of hunger. They did not care what percentage of the crop consisted of "kusak," i.e., the lowest grade of cotton. Why irrigate vacant patches of land? They belonged to the bey! Was it worth while breaking up with the mattock the crusty soil which covered the young shoots after a fall of rain? Allah sent the rain, and it was undoubtedly his will that the crop should perish this time, and thank Allah if the bey did lose the crop! In any case, whether the crop was good or bad, the emaciated dehkans, mere skin and bones, would starve. In any case they would have to cook grass to feed their ever starving families in the winter months. Far better, then, to lie on the reed thatch of one's adobe hut and save the remnants of one's strength basking in the sunshine; or, during an attack of malaria, to wrap up in a ragged gown, for the repair of which the bey would not give a scrap of wadding, however much one begged for it!

It was no use asking for charity even from God, for according to the teachings of "Tosavuf" (Suffism), the "myurid" (pupil) "must be in the hands of the shiek like a corpse in the hands of a washer of corpses"—voiceless, will-less and mindless. Whatever is done to him is right—for Allah created the world only for rulers!

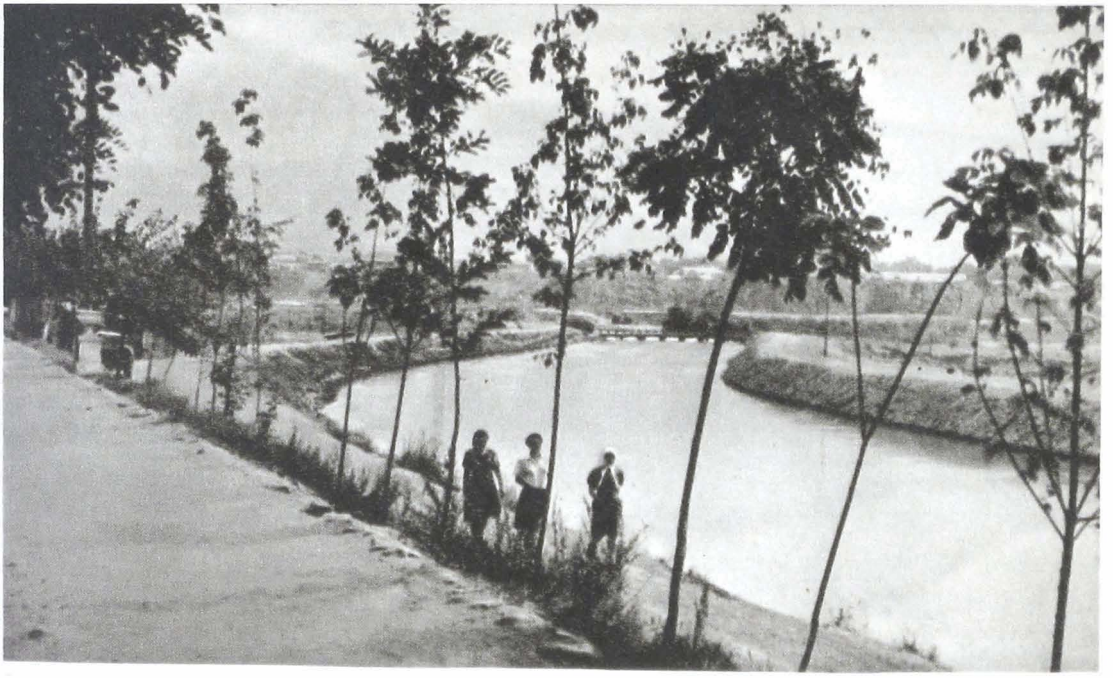
That is how the dehkans in the Hissar Vilayet of Eastern Bukhara lived up to the October Revolution. They had neither the strength

Lenin Street, Stalinabad

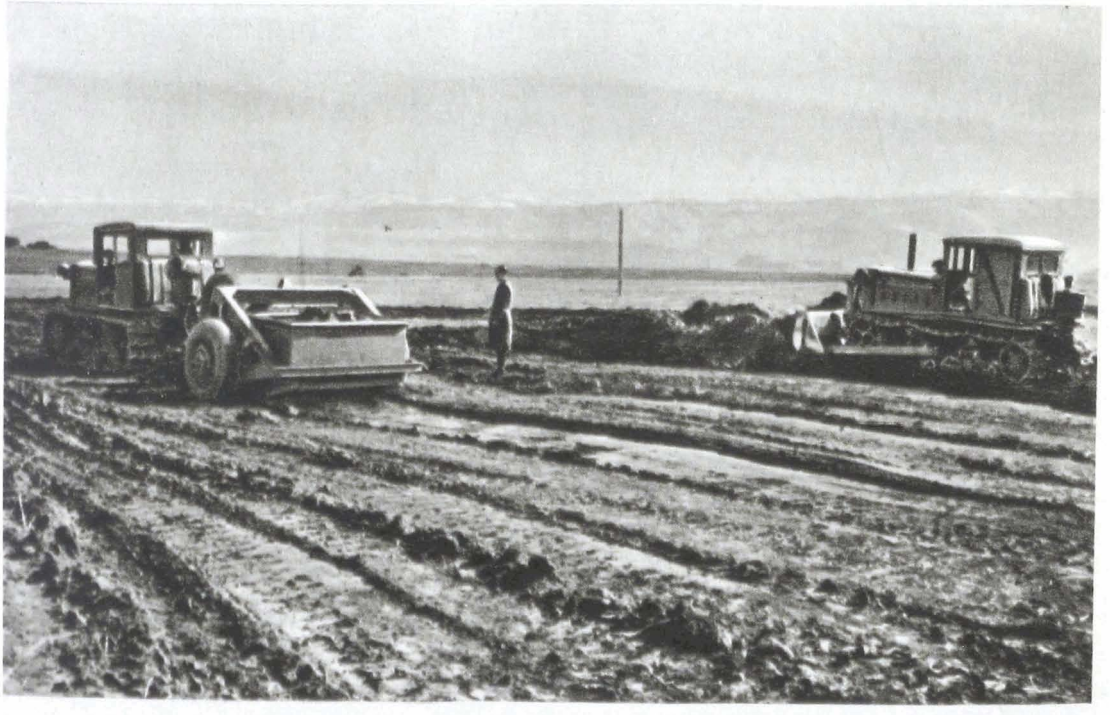
Young Pioneer House, Stalinabad

The Central Polyclinic in Krasny Partisan Street, Stalinabad

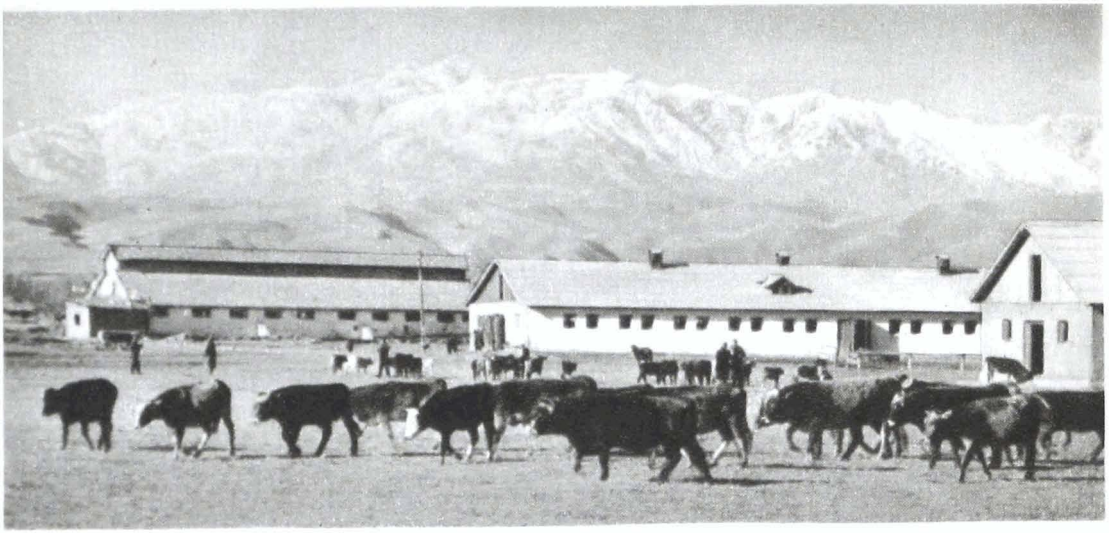
Spinning shop at the Stalinabad Cotton Combine



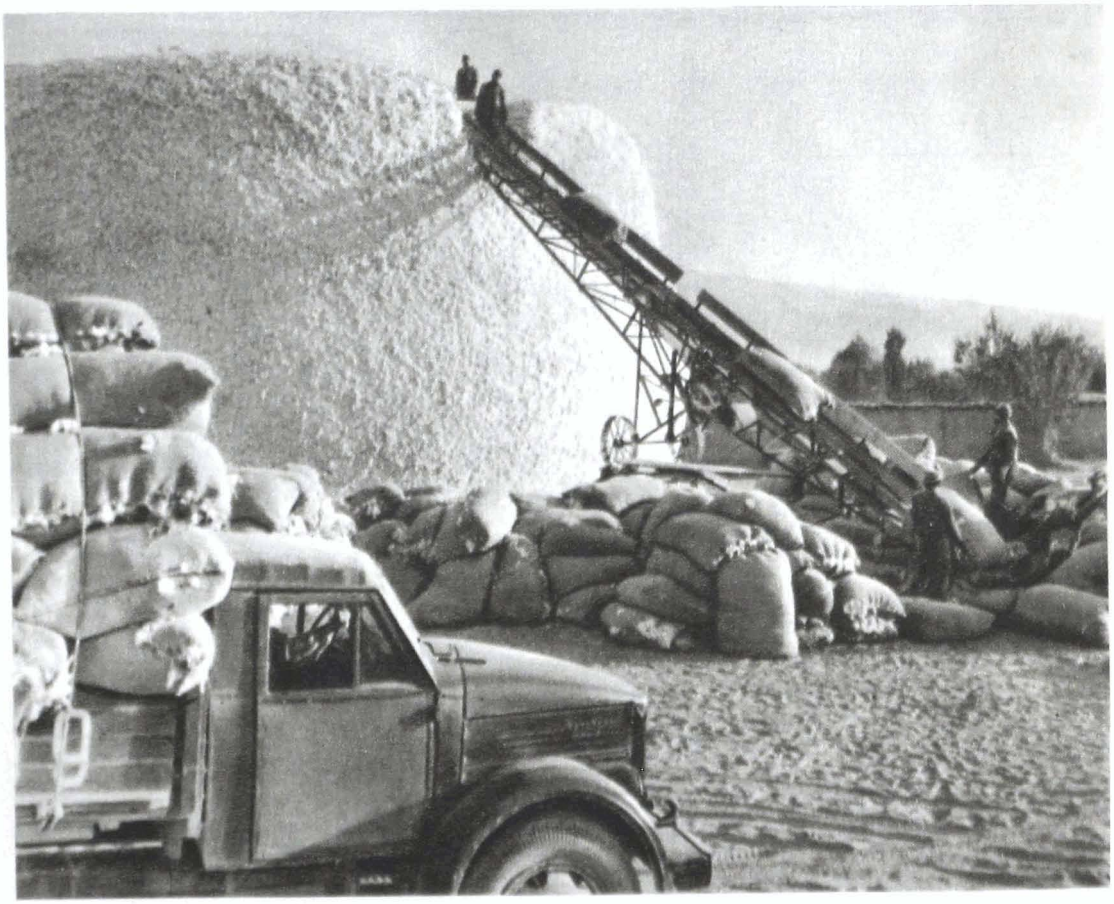
The Great Hissar Canal



Tractors of the Hissar Machine-and-Tractor Station laying out the fields of cotton-growing collective farms



The cattle of a new collective livestock farm



Piling cotton at the Orjonikidzeabad Collecting Station

nor, above all, any incentive to do more and better work than could be expected of a slave. The sole aim of the Emir's officials was to squeeze as much taxes as possible out of the dehkans in order to fill his private coffers—for, needless to say, not a groat was spent on the needs of the state or of the national economy.

In Bukhara "only the air was not taxed," says Sadriddin Aini, but the dehkans found that air hard to breathe.

That explains the popular uprisings which repeatedly broke out in the Hissar as well as in the other vilayets of Eastern Bukhara. But the beks had soldiers and prisons; the uprisings were suppressed, and the subdued dehkans had to pay even higher taxes and imposts than before.

In the Hissar Valley a fourth of the dehkans had no land of their own, and the small owners, constituting a third of the population of the valley, owned only one per cent of the land.

To this we must add that the Uzbek section of the population of the Hissar Valley was divided into tribes and clans, that the chieftains of the clans also exploited the dehkans, that enmity leading to bloody conflicts was deliberately fomented between the clans, that the slightest default was punished at the discretion of any one of the innumerable authorities according to the laws "of God and of the bey," and at the discretion of any official who invented his own penal laws. From all this we get an idea of the wretched existence led by the ignorant and rightless victims of the Emir's soulless governmental machine.

That horror has gone forever. The collective-farm fields in the Hissar Valley now buzz with creative, socialist, free and inspired labour.

2

The yearly cycle of operations in cotton-growing, from ploughing to harvesting, begins in the autumn after the crop down to the last boll has been delivered to the state, and after all the bits of cotton blown by the wind from the thirty-hundred weight and three-ton trucks have been picked up from the dusty road and carefully collected in the boxes and baskets placed for the purpose along the wayside.

And every year all efforts are made to introduce new scientific and more expedient methods; the fight goes on against conservatism and ancient tradition and for the new, Soviet agriculture.

After the crop is harvested the cotton plants remain in the fields. Formerly these were merely mown and the stubble was ploughed into the soil. Soviet agronomists proved that this stubble, as well as the weeds, were infested with pests which lived through the winter. When the next crop came up it was found to be infected with all sorts of diseases. Now the stubble is everywhere rooted up with special, tractor-drawn implements, and the fields are left perfectly clean.

After the fields have been cleared they are manured. Thousands of cart-loads of local manure are carried out to the fields and scattered over the ground. Formerly, nobody bothered about manuring the fields in proper time; but now not a single collective farmer would tolerate even a day's delay in this work.

In November the tractors go out to the fields for the autumn ploughing. Formerly, the cotton-growers gave no thought to the depth of autumn ploughing; they ploughed no more than about ten centimetres deep. Nor could they plough any deeper with the primitive ploughs they used, and to which they often harnessed themselves together with their oxen. Experience showed that the roots of many weeds develop at a depth of twenty centimetres and more, and today the ground is ploughed to a depth ranging from twenty-five to thirty centimetres, depending on the soil; only such ploughing is regarded as good. Weeds have ceased to be a frightful scourge to the cotton-growers of the Hissar Valley; they simply do not allow them to grow in the fields to choke the cotton plants!

All the collective farmers pass on to the next stage of the work: they mark out the plots, clean the irrigation and collector systems and put them in working order. In the past nobody wanted to clean irrigation ditches because it was not certain whether the greedy, bribe-taking mirab, or water official, would provide water, and if he did not provide water no dehkan regarded himself as being responsible for it. Besides many thought it better to leave the watering till the summer, and even hoped that by chance rain would fall in the summer!

Today nobody leaves things to chance. The canals and collectors are cleaned and repaired in good time, and every farmer is concerned about the depth of the subsoil water on his "chart," on every hectare of the section allocated to his brigade.

In December, January and beginning of February the farmers collect locally obtained fertilizers—dung, poultry droppings, ashes and the ground-up remains of old adobe fences—and cart them to the fields. Some of the kurgans, or ancient burial mounds, in the Hissar Valley were found to contain many substances capable of enriching the soil, and these have been dug up and carted to the fields.

At the same time mineral fertilizers are carted out. In the past no such fertilizers were used in the fields of the Hissar Valley. They could not be obtained, and nobody even thought about them. But when the Soviet government ensured the production of such fertilizers and their delivery to all parts of the Soviet Union the collective farmers in the Hissar Valley began to enrich their fields with them.

As is the case everywhere, in the winter the machine-and-tractor stations are busy repairing their tractors and farm implements. All the work is performed according to a strict schedule which not a single worker would even think of violating.

In January the sun rises higher and higher, the days get warmer announcing the coming of spring in the Hissar Valley.

At the end of January or beginning of February, depending on local conditions, the fields are harrowed and smoothed out. As a rule the fields are gone over twice. The fields echo with the chugging of tractors. All the people of the collective farm are out, eager to see whether the autumn ploughing had been done well, if so spring ploughing could be dispensed with; whether the mineral fertilizer had been effectively used, or whether much had to be added; whether the ground is sufficiently impregnated and moist, whether it is ripe. Experienced agronomists inspect and verify everything. Whoever listened to an agronomist before? The dehkans of the Hissar Valley had never thought about agronomists; they had never even heard the word "agronomist." Today, however, the collective farmers do not do a thing without first consulting an agronomist.

March or beginning of April. Spring is at its height. Nature bursts into bloom, the sun is hot, there is snow only on the mountain tops, glistening as if it were polished. Sowing time has arrived. It is now important to choose the proper moment between the rainfalls, not to miss the time when the soil is at its best ripeness, and not to be caught by the rain!

The seed, after being soaked in running water, are put into the drill-boxes and the drills are so arranged that the rows should be as straight as possible, for the straighter the rows the easier will it be to cultivate the cotton plants with machines, and the cultivation will be better.

The fields ringing with merry voices are bespangled with the motley colours of the women's caps and dresses. Everyone is eager to get the sowing done on the very first day, and many collective farms succeed in doing so!

After the sowing they wait on tenterhooks for the shoots to come up. They go out to the fields, touch the soil, smooth it with the palms of their hands, look anxiously up at the sky, listen to the weather reports and take the temperature of the air—hoping there be no rain or night or morning frost. They calculate again whether the right quantity of seed per hectare had been sown, whether they had been sown at the proper depth, and above all, whether the sowing had been started on the proper day from the scientific point of view.

All this will be shown when the shoots come up!

If they come up quickly, fewer seeds and sprouts will perish.

If they come up thickly, the farmers will be able to keep the plants at the required density.

If they appear simultaneously, it will be possible to protect them from pests and the ripening will be simultaneous.

All this determines the harvest!

If misfortune happens, if rain comes and the hot sun afterwards bakes the surface of the soil into a crust, the alarm is sounded: "All to the fields!" Heroic efforts are made carefully and thoroughly to break up the crust to enable the shoots to breathe and to push their way above the surface.

Or if frost comes. Again the alarm is sounded. All hasten to the fields. They light fires and the fields are covered with a blanket of smoke. The frost must be prevented from penetrating the soil and reaching the new-born shoots!

The appearance of the first green, frail, tender and helpless shoots still further increases the anxiety of the collective farmers. Even a light frost can now kill everything. At this time all the farmers are on the alert. Regular watch is kept in the fields. The telephone wires hum continuously with enquiries: "What weather is expected at night? Direction of the wind? Temperature? How many tenths of a degree?" Everyone is ready to meet the worst enemy—frost.

The young and very tender stalks must be protected as mothers protect their infants. If a stalk is fractured the plant will perish; it has not yet "wooded." For an adult plant a fracture is not so serious.

In the period from the appearance of the shoots to the budding the plants grow slowly and it is easy for the weeds to choke them, and so every brigade cultivates its section thoroughly and in proper time.

It happens, however, when seeds have fallen too deep into the ground, or not deep enough, when seeds have been damaged, or when seeds or sprouts have been killed by frost or by some other cause, bald patches appear among the mass of shoots. These bald patches must be planted again, and, if necessary, all the members of the brigades working on the adjacent plots will come to the aid of the one which has to do the replanting. This is done either with a one-row drill or by hand. In the latter case small seed-holes are made for the seed, moist earth is thrown in, and then it is covered with dry earth.

It is difficult to describe the efforts that are made to follow the rules of agrotechnics during the sowing and in the first cultivation of the young cotton plants. This is the most important period of the work, for in the main this determines what the crop will be.

Inter-row cultivation of cotton plants—thinning, proper spacing of plants, hoeing and weeding, which during the whole vegetation period keeps the earth crumbly and the fields clear of weeds which are exceptionally rank after rain—calls for great knowledge and experience, unflagging attention, thoroughness and care. In the past this was

usually done two or three times; now it is done not less than six times, and often seven or eight times.

In June the cotton begins to blossom. Experienced collective farmers who love their work can do much to hasten the blossoming and thus gain time in the development and ripening of the cotton. The condition of the implements, the quality of the hoeing and weeding, ruthless rejection of badly cultivated patches and even of rows, and the depth of the hoeing, are all important for this!

As the popular saying goes: "Water is the blood of cotton." As is known, both anaemia and plethora are harmful for an organism. Similarly, both shortage and excess of water are harmful for cotton. The cotton plants must receive exactly the amount of water needed for their proper development, and precisely at the time they need it most. In the hot season, for example, the watering must be done at night. The cotton fields are now watered six, eight, ten and even more times during the vegetation period! Cotton also needs regular doses of additional fertilizer: in the budding period, at the beginning of the blossoming time, and at the beginning of the fruiting period. Not a day must be missed!

In the middle of July, when the best, excellently developed cotton plants are weighted down by an abundance of bolls, the inexperienced farmer thinks that this is good: the more branches and bolls, the bigger the crop! Experienced cotton-growers, those who employ scientific methods of cotton-growing, know, however, that the excessively "dense" branches overshadow and choke one another and begin to starve. The enfeebled plants cannot provide sufficient nutriment and the buds and ovaries begin to fall. The quality and the yield of cotton from such plants diminish.

In that period at all the collective farms the cotton plants are topped in accordance with the method proposed by Academician Lysenko. The sterile branches, the top of the main stem, the monopodial branches and the lower leaves are removed. As a result every boll that has formed by that time receives sufficient nutriment and will be quite sound; it will open earlier, the cotton will be of high quality, and the yield will be higher. This operation gives an extra yield of five, ten and sometimes twelve centners per hectare!

In August the bolls begin to open. Their leaves losing moisture shrink and crack; the wind dries them still more and they burst. In that season the cotton fields are beautifully white. And the more timely and thoroughly the agrotechnical rules are carried out, the earlier and more simultaneous is the opening of the bolls.

Before harvest time the collective farmers make a preliminary estimate of the crop. They calculate the number of plants and bolls, define the quality of the latter, calculate which will open earlier and which later, whether before the autumn frost or after; whether the smallest, underdeveloped bolls will open in time; whether they will produce good fibre, or "kusak" as the inferior fibre is called. A boll of medium cotton picked before the frost weighs seven or eight grams, whereas one picked after the frost weighs one and a half or two grams. The most valuable sorts of cotton are those that are picked early. Their seeds are kept for sowing the next crop. Cotton picked before the frost is regarded as select, or first grade; that picked after the frost is regarded as fifth or sixth grade.

And already at that time the collective farmers make a preliminary estimate of the crop.

The collective farmers prepare for the cotton-picking as for a long and intense battle. Daily and weekly schedules are drawn up for every brigade and for every team. Aprons and bags are prepared with separate pockets for the different sorts—sound, and those damaged by pests. The scales are tested; places are cleared for the cotton dumps. The roads, bridges, drying sheds, carts and motor trucks are repaired. The dams round the fields are removed so as not to hinder traffic. Day-nurseries are organized in the fields where mothers can leave their children. The cart-horses are put out to rest.

New socialist emulation agreements are drawn up. The local radio services and numerous wall newspapers report progress in the preparations. All attention is concentrated on the coming harvest operations. All the people are enthused, tense, united by a single aim. All the work put in before is now to show its results. Mistakes, miscalculations and shortcomings will be revealed. And the names of those who worked well, on scientific lines, who thought not of themselves,

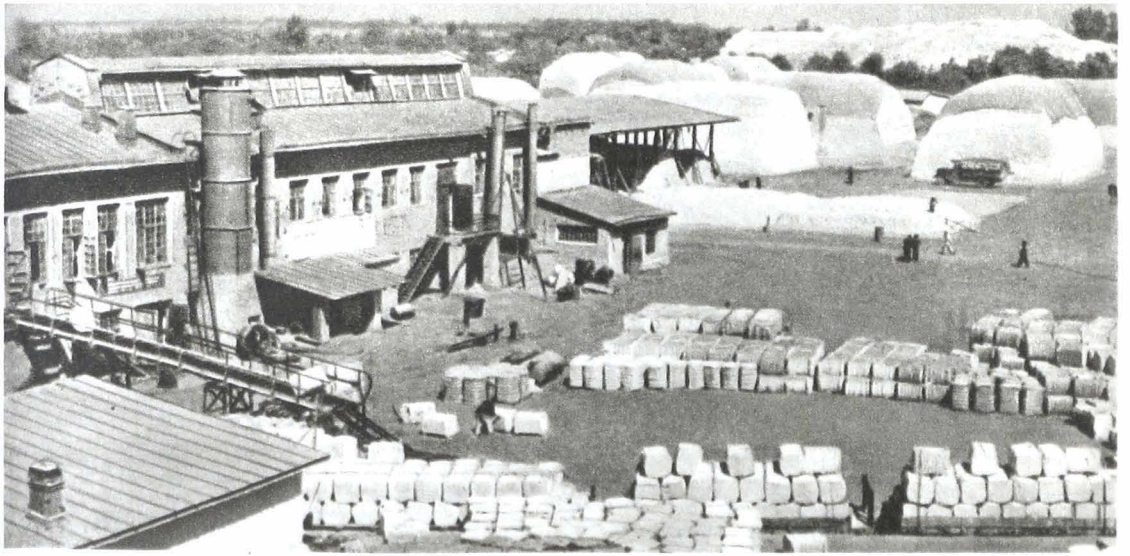
but of the collective body, of the state as a whole, who carried Stalin's great ideas in their hearts, those names will be broadcast throughout the land.

Cotton picking is the great last battle which crowns with victory the heroic labours of the whole year. Conducted strictly according to plan, the operation is divided into periods: from the first selective picking to the mass picking; from the early-autumn to the late-autumn picking, when the sharp, cold wind already blows, breaking the plants, when the rain comes down in torrents, and when, sometimes, snow falls on the fields in which the last bolls have still to be picked, or the cotton fluff blown by the wind has still to be gleaned.

The work of the cotton pickers, men and women, is strictly organized; all the able-bodied inhabitants are enlisted and attached to definite brigades and teams. Fulfilment of assignments is checked and reported on notice boards and in bulletins. Those who exceed daily assignments receive bonuses. The best working conditions are created: canteens and day nurseries are organized in the fields, the picked cotton is carted from the rows to the waiting motor trucks, there is no unnecessary waiting or walking about.

What is it that enables Stakhanovites to pick a hundred, two hundred and even more kilograms of cotton a day? First of all the fact that nobody now makes useless and aimless motions in picking the cotton, and advantage is taken of every moment of daylight. The Stakhanovites have learned to pick cotton with both hands and from two rows at once. Moving between the rows the experienced cotton picker grasps the cotton with all the fingers at the base of the boll, pulls it out clean with a deft tug, swiftly grasps the next boll and picks from three to five bolls without wasting time to put each boll into the pocket separately. Furthermore, the picker starts picking the lowest bolls and then picks the middle and top ones. The lower bolls are thus saved from falling leaves and brash.

If the crop is so big at a farm that all the hands are insufficient for getting it in quickly, neighbouring farms and people from the town come to its aid. Students and office employees, factory workers, writers and engineers come out to such farms in hundreds of motor trucks. Not



The Kirov Cotton-Ginning Mill in Kurgan-Tyube

A festival at the Comintern Collective Farm

Testing cocoons at the Lenin Silk-Growing Collective Farm, Voroshilovabad District

a man or woman in town would think of refusing to go to the aid of a collective farm which has raised such a big crop that it cannot harvest it quickly solely by its own efforts—for to get cotton is the republic's first task, its task of honour, and the cotton deliveries to the state increase with every passing year.

Every collective farmer strives to pick more cotton today than he did yesterday, and to pick more tomorrow than he did today. No task is more honourable than that of excelling the neighbouring team, brigade, collective farm, district and region. The daily results of socialist emulation are eagerly scanned by all—from the young women cotton pickers to the Ministers of the Republic.

In 1950 some of the collective farms in the Hissar Valley and in the Leninabad Region began to employ cotton-picking machines. These complicated machines had already been tried out in experimental fields and had worked well, but to make them fully effective much work has still to be done, particularly by plant-breeders, who are striving to raise varieties of cotton plants that will ripen simultaneously. In 1952 hundreds of cotton-picking machines were employed successfully in Tajikistan.

When employing cotton-picking machines it is very important first of all to remove the leaves from the plants, because the leaves hinder the work of the machines. In this matter great assistance is rendered by aircraft. The fields are sprayed from the air with a special substance which causes the leaves to fall from the plants and only the bolls are left. Within the next few years this work of the Agricultural Air Service will be developed on a very large scale.

The features of every item in the cycle of operations carried out by the cotton growers of Tajikistan today are the highest, socialist forms of organization of labour and the most advanced, Soviet methods of agriculture. It took years of hard, persevering, country-wide struggle against all that was backward, conservative and anti-scientific to achieve this. The Tajik people, only recently oppressed and backward in its development, achieved unprecedented successes, which made it an equal, worthy and happy member of the friendly family of peoples of the Soviet Union. Within a short space of time Tajikistan became one of the

leading cotton-growing republics in the U.S.S.R.; and the Hissar Valley, together with the Leninabad and Vakhsh regions, holds a leading place in the development and successes of cotton-growing in the republic.

3

Once a year, when a brief period of calm sets in on the cotton ocean of Hissar, when the entire crop has been harvested and delivered to the state, when the huge incomes of the collective farms have been shared out among the members, and when every member has put away in his barns and sheds the truck-loads of wheat, flour, rice, sugar and livestock that were brought to his home, when, in short, in the period of immense satisfaction with the work done during the year every collective farmer, man and woman, wants to celebrate this victory. The newspapers publish the lists of honours and high titles awarded by the government to the most outstanding workers together with the portraits of the new celebrities. This, and the prosperity, security and happiness he and she enjoys, confirm in everybody's mind the greatness of the Soviet system. In this period family celebrations, such as betrothals and weddings, are held.

Invitations are sent out far and wide. Housewives get busy cleaning rice to make excellent plov (rice and mutton), wine, fruit, sweetmeats; there is everything in abundance for the entertainment of the guests.

Guests come in cars from Stalinabad and from the district centre, and in motor trucks and on horseback from neighbouring collective farms. Among them are leading Party workers, writers, and People's and Merited Artistes from all the theatres in the capital and from the Philharmonic Society; architects and artists, engineers and scientists, students, and Stakhanovites from mills and factories. In groups of forty or fifty come chairmen of collective farms, team and brigade leaders, ordinary collective-farm members and agronomists—the women in silk and velvet, the men in their best holiday clothes, all gather merrily at the collective-farm festivals.

The village is decorated with flags, banners and pictorial posters. On a bright sunny day all the celebrations are held in the open air.

The guests assemble in a place covered with carpets where a meeting is held. In another place the plov and other viands are served. Further away, on a flat field, horsemanship competitions are held followed by dancing and concert performances by the best, they must be the best, artistes in the republic. The very air must ring with laughter and happiness.

How eagerly the results of the past year's work and the plans for the ensuing year are discussed! Everyone wants to tell the other what fills his heart, to tell how his collective farm achieved success, and to chaff those who had not worked so well. Laughter, jokes, humorous stories, parables and proverbs, of which Tajiks know hundreds, are the order of the day.

Usually the celebrations start with a meeting. Among the company sitting on the carpets at low tables covered with red cloth, places are reserved for leading Party and Soviet workers, chairmen of collective farms, Heroes of Socialist Labour and the most outstanding members of the farms. The hum of conversation dies down. The figures of the results achieved are read and the names of those who had done most to achieve them are called out. Each of these receives a prize. The first to be called is brigade leader so-and-so. All rise and applaud. The brigadier takes the prize and delivers a short speech. In most cases he in his speech announces what results he, or his brigade, undertakes to achieve in the ensuing year.

Some think to themselves: "Isn't he promising too much?"

But the figures mentioned under these circumstances sound like a pledge, and the brigadier will work hard throughout the year to fulfil it, for if he fails he will be ashamed to face a similar company next year. All the people assembled from all parts of the Hissar Valley hear what he says, and before pledging himself to these figures he had pondered over them a great deal, had discussed with the members of his brigade the mistakes they had made in the past year, and how much the yield will be increased if these mistakes are avoided in the ensuing year.

The next to be called is a girl, an ordinary member of the farm. Her cheeks flushed and pale in turns, with lowered eyes, she stands shyly

in front of the table, beautiful in her shyness. Happiness, emotion and pride, all intermingle in her breast as she becomes conscious of the hundreds of approving eyes that are turned towards her. The prize she gets is a fine, fat-tailed, Hissar sheep, and the chairman of the farm, clutching the struggling sheep's curly wool, leads it towards the girl.

The girl thanks the chairman and then looks round searchingly.

"That one," she says, pointing to another girl. "I challenge her to pick a hundred centners!"

The other girl answers promptly: "I have thought about it already. I will pick a hundred and five centners!"

Again there is applause.

This goes on for an hour or two. The chairman writes down the pledges as they are made. The last woman prize-winner, bowing to the presidium, and putting on the silk kerchief she has received as a prize, leaves the table. At once the philharmonic orchestra strikes up and a People's Artiste of the Republic trips into the arena. Everybody knows and loves her. In the hoeing and cotton-picking seasons she came out to the farm, and during the dinner hour she used to dance between the white rows of cotton plants. And, of course, she was invited to dance at this feast. She is followed by other dancers and singers, and by a large rubob (mandoline) orchestra. Away out in the field, horsemen, galloping at break-neck speed, are snatching a slaughtered prize goat from one another for the honour of dashing round the dusty riding ring in sight of all and throwing the goat at the feet of the umpires. In large, smoking cauldrons standing in a row the plov is being cooked to the point. Soon the feast begins.

Late at night, in the bright moonlight, automobiles speed through the valley on their way home. They dash past vineyards and young orchards. Winter snow on the mountains lies in a low strip right over Stalinabad. The mountain passes, the road to Garm, the road to Anzob, and many other roads in Tajikistan are already closed. But in the gardens in the capital it is still possible to find the last roses which have survived the belated night and morning frost. In spite of the snow, district Party Secretaries manage to make their way along these roads on

their "GAZ" cross-country cars to the capital to attend the next meeting of the Central Committee. They had worked hard during the year to enable Tajikistan to overfulfil its cotton deliveries plan and they want to report the results.

4

The raw cotton harvested by the collective farms is transported to the ginning mills. Part of the ginned cotton is sent to the Stalinabad Textile Combine, but the bulk of it is loaded on trains and sent from the Hissar Valley to various destinations in the north.

The Hissar Valley is not only rich in cotton. The slopes of the surrounding mountains are planted with grain crops. Non-irrigated crops occupy a large area and give good yields. Near the railway there are numerous industrial enterprises. In Orjonikidzeabad there is a big flour mill; in Cheptura there is a rice-hulling mill, a canning plant, and other plants; in Regar there is an oil mill; in Pakhtaabad there is a volatile oil plant; in Karatag large deposits of phosphorites are mined. During the past few years many mining plants have been opened on the southern slopes of the Hissar Range. The Hissar Valley is being transformed into a big industrial district, the importance of which is enhanced by the proximity of the railway and of Stalinabad.

Of great importance for the region is the development of livestock farming. The celebrated Hissar sheep and droves of Lokai horses graze on the mountain sides. The experienced herdsmen of the Almasi base on the river Khanak drive heavy-weight bulls to good pastures in the mountains, a thousand metres above sea level, where there is no dust, the air is fresh and pure, and the temperature is moderate even in the hot season of the year. Among the grasses in those pastures there is plenty of succulent bulbous bluegrass, brome, wild oats, and wild wheat; and of the legumes there is milk vetch, esparcet and wild alfalfa. Feeding lustily on this succulent, green vegetation, the animals gain appreciable weight already by the middle of June.

Strong and fleet-footed horses frisk in the horse-breeding farms, and collective-farm flocks and herds fatten well everywhere.

The cultivation of rice, of oil-bearing crops—oil flax, peanuts, geraniums and sesame—and of fruit and vine is also growing year after year in the Hissar Valley; tens of thousands of trees are being planted along the roads and canals.

The best collective farms in the Hissar Valley, such as the Stalin Collective Farm, are introducing new methods of increasing the cotton yield per hectare. In conjunction with scientists they are finding practical solutions in their fields for such problems as the density of the cotton plants, space between rows, and many others.

At the present time the Hissar Valley is a region of wealth and abundance, a beautiful oasis strip stretching between high, rocky mountains.


SOUTHERN
TAJIKISTAN

I

SOUTHERN TAJIKISTAN is situated beyond the low mountains which border the left side of the Hissar Valley and gradually turn southward. To it belongs the valley of the lower reaches of the river Panj (Amu Darya) and the valleys of the lower reaches of the tributaries of that river—the Kafirnigan, the Vakhsh and the Kizyl-Su.

"The burning sun scorches an uninhabited desert. The earth is parched with thirst. Waves of dry, hot sand. Snakes and enormous lizards rustle in the sand."

That is how a traveller in the old days described the Vakhsh Valley.

Today the entire Vakhsh Valley is covered by a system of irrigation canals as ramified as the nervous system in the human body. Scores of new towns and urban settlements which have grown out of the old kishlaks, are scattered over the whole of Southern Tajikistan: Kuibyshevsk, Oktyabrsk, Vakhshstroi, Voroshilovabad, Molotovabad, Jilikul, Nizhni Panj, Mikoyanabad, and others. There are numerous, big, flourishing kishlaks, hundreds of collective and state farms, livestock farms, machine-and-tractor stations, scientific research stations, electric-power stations, factories and mills, railways, motor roads and bridges. Only the course of the river and the topography of the mountains have remained unchanged. As for the rest, it is a new region teeming with life.

The majority of the tens of thousands of inhabitants of Kurgan-Tyube (the centre of the Vakhsh Valley) and of the other towns and

settlements do not now suffer from malaria, or from "Persian typhus" and other diseases which once infested these parts. The surrounding marshes have been drained, the fields are dazzling white with blooming cotton.

At one time the Vakhsh Valley was a dreary and poverty-stricken region. And yet....

...One day, in February 1927, the postman delivered at the offices of the Central Asia Textile Workers' Trade Union a letter in a blue envelope bearing the Tajikistan postmark. The letter read as follows:

"Dear Comrades,

"Although certain cotton experts have been sceptical about making further experiments in cultivating Egyptian cotton, all of us nevertheless think that in the Sarai-Kamar and Kurgan-Tyube vilayets of Tajikistan we have found our Soviet Egypt.

"The eastern side of the Sarai-Kamar and Kurgan-Tyube districts, situated in the valleys of the rivers Vakhsh and Panj, is protected by mountains from the cold Siberian wind. Consequently, the vegetation period in these districts is much longer than in the other districts of Central Asia. In Kurgan-Tyube and in Sarai-Kamar the temperature in the shade rises to 40° and sometimes to 45° C. As you know, only the Sahara and some parts of Mesopotamia near Bagdad can boast of such a temperature.

"We have carefully studied and tested the conditions for the ripening of Egyptian cotton and we are now quite convinced that the 180 to 200 bright sunny days in Southern Tajikistan open unlimited possibilities for growing this cotton on a mass scale.

"Thinking theoretically, we see no obstacles to the cultivation of 'Egyptian' in the dehkans' fields in Southern Tajikistan. Our imagination is working well. We are already picturing to ourselves big 'Egyptian' state farms in the valleys of the Vakhsh and Panj, tens of thousands of hectares covered with snow-white cotton blossoms, the rumbling of hundreds of powerful 'Internationals' and 'Caterpillars', of ginning and oil mills, and the river Vakhsh, turned back on its course,

irrigating the once sterile sandy loam plateau of Kumsangyr, Ak-Gozy and Kafir-Kal.

"When will that be, comrades? We do not know, but, of course, it will be. Support us, comrades. See to it that we get a small quantity of 'Egyptian' seeds for our first experiments. We shall keep you closely informed about the progress of our work.

"Yours, *Artyomov, Antonov, Shiyan.*

"Sarai-Kamar. . ."

The first twenty-seven seeds were planted in the kishlak Khalkoyar. The agronomists were assisted by dehkan Haji Ahmet.

In July 1927 ten plants withered. The other seventeen continued to flower, but soon somebody's ass, tempted by the succulent green, ate seven of these plants. The surviving plants were surrounded by an adobe fence. In the autumn of 1927 these ten plants fruited. They produced only five or six bolls each, but they served the enthusiasts as material proof that the thing could be done.

The Sarai-Kamar District Party Committee passed the following resolution:

"The Sarai-Kamar District Party Committee attaches exceptional importance to the Egyptian cotton problem and extends its patronage to Comrade Artyomov's experiments. The District Committee calls the attention of Communists to the necessity of creating around Comrade Artyomov's experiments an atmosphere of complete confidence and comradely support, and it is convinced that the Communists will be in the front ranks of the planters of Egyptian cotton. . . ."

Soviet scientists began to make a careful study of the climate of Southern Tajikistan and eventually they found that conditions in the Vakhsh Valley were favourable for the cultivation of the most valuable sorts of Egyptian cotton.

Practical proof of this was provided by the experiments made by P. Artyomov and his friends.

In the following spring they received a whole sackful of Egyptian cotton seed—sixty-four kilograms. They planted three-quarters of a hectare and harvested twelve centners of cotton.

In the third year they planted thirty-two hectares and obtained an excellent yield—15.5 centners per hectare. Dehkan Ibrahim Imankulov picked 23.2 centners from one hectare. The cotton-growers in Egypt could not even dream of obtaining such a yield.

The Central Committee of the Communist Party of Tajikistan recognized the work of cultivating Egyptian cotton as being of exceptional importance for the whole of the Soviet Union. The Young Communist League of Tajikistan extended its patronage to the growers of the new sorts of cotton.

In 1930 the Vakhsh State Farm planted fine-staple cotton on three thousand hectares!

The very first news that the Bolsheviks intended to convert Tajikistan into a base for the cultivation of fine-staple cotton caused a sensation in England, and the English newspapers tried to convince the whole world that the Soviet Union was indulging in impossible dreams. In August 1928, the *Sunday Express* wrote that "Egyptian" cotton could be grown only in the climate of Egypt and could grow nowhere else.

English cotton experts vehemently asserted that Egyptian cotton would freeze and perish in the continental climate of Central Asia, and that the climate of Russian Transcaucasia was also unfavourable for cotton-growing.

But none of the arguments of the English "well-wishers" could turn the Soviet people from their purpose.

The difficulties were, indeed, enormous. Scores of most complex problems stood in the way of the practical accomplishment of the gigantic task of developing the Vakhsh Valley.

The security problem—the valley ran on to the almost unprotected frontier.

The water problem—a large part of the land was not irrigated.

The soil problem—the soil had not been studied, and it was known it easily salifies.

The population problem—after the Basmachi raids the valley became almost uninhabited.

The problems of communication, transportation, public health, and many other problems.

In 1928 an exploration and survey party was sent to the Vakhsh Valley to investigate the possibilities of large-scale irrigation construction.

The party worked under most difficult conditions; a group headed by the engineer Lukovnikov was killed by Basmachi. In spite of everything, however, in 1930 the exploration and survey work was completed.

In 1928 and 1929 experimental planting of fine-staple cotton was conducted in the Sarai-Kamar District (later renamed the Kirovabad District) and in some of the collective farms in the Leninabad Region. The results were good.

In 1929 the first cotton-ginning mill started operation in Kurgan-Tyube.

In the following January a cotton and alfalfa experimental station was organized in Jilikul. Here the agronomists Krasichkov, Parishkura and Tishchenko, who later became the most celebrated scientific plant-breeders in Tajikistan, began their research work.

The inhabitants of the mountain kishlaks were encouraged to settle in the Vakhsh Valley and they received every assistance from the state.

Hospitals, malaria dispensaries and schools were built; co-operative societies were organized and the supply of manufactured goods was increased; roads were laid and ferries were arranged.

All the conditions were created for the large-scale cultivation of cotton in the Vakhsh Valley.

The winning of cotton independence for our country became a most important task. That task was given to the cotton-growing republics by the Party and the Government. An important place in the program of development of cotton-growing was assigned to Tajikistan. The Vakhsh Valley was to be made the base for the cultivation of fine-staple cotton.

Soon after it was decided to build the biggest irrigation system in the country. The entire republic was inspired by a new word: "Vakhsh-stroi." (The Vakhsh Valley Project.)

2

For thousands of years people had dreamed of a permanent irrigation system in the Vakhsh Valley. That dream could come true only under Soviet rule.

Work was begun in 1931.

The head structure was built in rock ground a kilometre and a half above the head structures of the ancient Juibor and Jilikul canals. The first four and a half kilometres of the main canal were dug in rock and pebble—the bed had to be about twenty metres deep.

The entire stretch of the building site was divided into hundreds of "pickets." At picket No. 46 the water from the main canal was diverted northward into the north branch to feed the reconstructed Juibor and Jilikul canals and the Mardat irrigation ditch. At picket No. 246 a dam with a forty-metre overfall was built for the Ak-Gozy electric-power station, the building of which came into the second part of the plan.

A dam with such an overfall had not been built anywhere in the world before.

A kilometre and a half lower down, the main canal ends with the central structure which directs the water in three directions: north-west, south-west and south. The diversion of water in the main canal equals a hundred and fifty cubic metres per second, the usual diversion of the whole of the river Volkhov. Among the chief structures built was a central spill-way collector, twenty-two kilometres long, for the purpose of diverting superfluous water into the river Vakhsh.

Besides this, many minor canals were built: distribution, irrigation and collector canals and spill-ways.

The total length of the Vakhsh irrigation network is thirteen thousand kilometres. The earth removed amounted to twenty million cubic metres, and the concrete and ferro-concrete laid amounted to sixty thousand cubic metres.

Formerly the people inhabiting Southern Tajikistan could not have conceived of work on such a scale!

On learning that the Vakhsh Valley Project had been approved, the dehkans of the Kurgan-Tyube District assembled in large numbers out-

side the building of the District Soviet Executive Committee and enthusiastically welcomed the scheme: the herdsmen, cotton-growers and former hired labourers fully appreciated the significance of the work ahead. The entire population of Southern Tajikistan at once gladly offered their services on any work that did not call for special technical knowledge.

The news about the initiation of the Vakhsh Valley Project alarmed the imperialists. At this time the industrialization of the Soviet Union was already in full swing, but some machines had still to be purchased abroad. Among those who came to assemble those machines were all sorts of "consultants," "experts" and "representatives of the contractor firms."

One of these "experts," an American named Ludwell Gordon, after studying the preliminary plan of the Vakhsh Project, addressed a meeting of the commission of the Council of People's Commissars in Stalinabad.

"You are great dreamers," he said. "You have wonderful imaginations. I have worked on the huge Imperial Valley and Indian projects. The United States firms regard me as a practical, sober-minded, businesslike American.

"I have seen the gold-seekers in California, I know inventors of oil stoves who dream of becoming Edisons, I have talked to H. G. Wells, the most imaginative writer of our times. My friends, these people have bold ideas and terrific plans. But what you are planning to do in the Vakhsh Valley is far and away above anything they are thinking of.

"I assert that mankind has not witnessed work of this kind under such conditions. Pardon me for saying so, but I think it unfeasible...."

And with a sour smile the American expert picked up his papers and left the meeting without waiting to hear the discussion.

But what seemed impossible to the Americans was perfectly feasible under our conditions, and within the power of the Soviet people.

Thousands and thousands of dehkans came down from the mountains to work on the Vakhsh Project. Large numbers of the inhabitants of the valley set to work. At that time there were not yet any Tajik engineers or technicians. The entire directing and engineering personnel

consisted of Russians; but later, cadres of Tajik technicians and engineers were trained on the job.

From the railway stations up the river Amu Darya moved steamships and barges loaded with excavators, tractors, mechanical equipment, explosives and provisions. Unloaded on the deserted bank of the Panj, the tractors travelled under their own power a hundred and twenty-five kilometres across the scorching desert. Clouds of biting loess dust filled the air day and night. On the Panj and in Kurgan-Tyube people left their tents armed with rifles to hunt tigers and wild boars.

Across the mountains from Stalinabad to Kurgan-Tyube came hundreds of camel and cart caravans. Along the narrow and still rough road, over mountain passes, from Stalinabad and through the desert from Panj, came motor trucks covered with dust, groaning as their wheels skidded in the dry thick loess. Some had to be dug out with shovels, others sank in the reed-covered bogs; the water in the radiators became boiling hot; the men wound wet cloths round their heads to save themselves from sunstroke. Telephone lines were laid; the poles for them had to be brought from far away. At the same time a narrow-gauge railway was laid from Nizhni Panj to the central base of operations—to the place where the kishlak Tupalan, destroyed by the Basmachi, had existed, fourteen kilometres from Kurgan-Tyube. Here a town of tents, a vast builders' camp, arose.

And when the foreign imperialists saw that what had seemed impossible to them was actually being done by the Communists, they decided to take action.

What they did was fully in keeping with the spirit of "democratic Great Britain."

As was stated earlier in this book, Ibrahim-bek, the chief of the Basmachi and the Emir's right-hand man, after suffering repeated defeat, fled to Afghanistan. In the spring of 1931 at the head of many thousands of Basmachi, trained by British officers and armed with British rifles and machine guns, Ibrahim-bek suddenly crossed the Panj and invaded Southern Tajikistan.

Irrigation work in the Vakhsh Valley. Digging canals in the Kurgan-Tyube District

The Vakhsh Zonal Station of the All-Union Arid Subtropics Research Institute. Tractor disc ploughing of rows in an apple orchard

Apple picking at the Dimitrov Collective Farm, Kurgan-Tyube District

The earth was drenched with the blood of Tajik dehkans, of Russian builders, of peaceful agronomists and cotton-growers.

The Basmachi hanged women who had put off the paranja, they burned down co-operative stores and warehouses, they shot tractor drivers. Their aim was to wreck everything the young Soviet Republic had built, or was building. Their chief aim, however, was to wreck the Vakhsh Valley Project, to transform the Kurgan-Tyube, Jilikul and the Aral Districts into a wilderness.

But the Basmachi and their masters, the imperialists, had miscalculated when planning that raid. They had no idea of the progress in socialist economic development Tajikistan had made during the few preceding years, and they failed to realize what strength lay in the unity of the dehkans who had only recently united in collective farms.

Sixty thousand dehkan "red staffs" rose to assist the units of the Red Army.

As a result of a series of swift operations by the Red Army and the "red staffs," the Basmach horde was utterly defeated and wiped out. In June 1931, when fleeing from pursuit, Ibrahim-bek with the last of his supporters tried to cross the river Kafirnigan, but was caught by Mukum Sultanov, a Tajik collective farmer, who took the captive bandit to the nearest Red Army unit.

The wild plan of the imperialists was foiled.

By the beginning of 1932 operations on the Vakhsh Project were in full swing along the whole front on an area of two thousand square kilometres. In them were engaged twenty thousand workers, five hundred tractors, hundreds of motor trucks and thousands of machines. Twenty-four excavators, sent here dismantled and assembled on the job, bit into earth which had not been touched for ages. There were more excavators here than on the Dnieper project, and more than on the Panama Canal project about which so much noise was made throughout the capitalist world.

The Vakhsh Valley was already streaked with lines of canal beds.

In March 1932 the narrow-gauge railway, over a hundred kilometres long, was opened and the first trains reached the banks of the Vakhsh.

The Afghan bank of the river, opposite the Nizhni Panj wharf,

became a place of pilgrimage for masses of Afghan dehkans, who came from distant kishlaks to see the Soviet locomotives, steamships, barges and motor trucks.

A feature of the November 7th celebrations in 1932 was the official opening of the Stalinabad—Kurgan-Tyube motor road.

New towns sprang up. One of the first of these was Kaganovichabad.

Meanwhile the collective and state farms in the Vakhsh Valley and throughout Southern Tajikistan were sowing fine-staple cotton.

In 1931 fine-staple cotton was planted in the republic on an area of thirteen thousand hectares; in the following year the area was more than doubled. By this time two-thirds of the individual cotton-growing farms in the republic had been collectivized. In 1931 the fine-staple crop amounted to 1,930 tons, and in 1932 it amounted to 4,300 tons. The Vakhsh Valley became the principal region in Tajikistan for the cultivation of fine-staple cotton. What was needed, however, was water, water, water!

The Young Communist League became the patron of the Vakhsh Valley Project. Over six hundred members of the League were working on the job.

When the first consignment of excavators arrived at Nizhni Panj the American "experts" argued that the only way they could be transported to the building site was by railway. But the railway could not be finished soon, although the Communists and Young Communist Leaguers organized subbotniks at which thousands of volunteers assisted in the work in order to accelerate its construction. Young Communist Leaguer Saburenko proved that the Americans were wrong. He offered to drive his excavator from Nizhni Panj under its own power. The Americans said: "The Russian is crazy," but in spite of their jeers Saburenko successfully drove his excavator a hundred and twenty-five kilometres through the desert to the building site and started work. He was followed by the other excavator drivers with equal success.

Foiled in this matter, the foreign "experts" secretly resorted to sabotage.

For mysterious reasons machines broke down, the foreign firms' blueprints proved to be faulty, the delivery of vital machine parts was

delayed, or the parts went astray en route. Suddenly the excavators refused to work.

The Communists and the non-party workers exposed the enemies, repaired the damage, and by shock-brigade efforts made up for lost time.

By September 1933 the head structure and the main canal were finished.

In 1934 the main irrigation canals were put into operation. The first part of the Vakhsh Project was completed.

The Vakhsh Valley received the water it had been waiting for so long!

The mass settlement began of collective farmers from all parts of Tajikistan on the new, irrigated land.

The Great Patriotic War interrupted the construction of the second part of the project, but work was resumed when the war ended. A big plant for the manufacture of building materials was erected. On the irrigation system numerous collective-farm electric-power stations have been built. When the Big Vakhsh Hydro-Electric Station is completed it will be possible by means of mechanical irrigation to put another fifteen thousand hectares under cultivation. The electrification of irrigated farming will help to develop agrotechnics still further.

In 1931 a campaign was launched for the employment of high-level agrotechnics, for improving the fertility of the soil, for altering the nature of plants, for high yields per hectare.

In the Vakhsh Valley and on the Panj a number of agricultural research stations were set up. The Jilikul cotton-alfalfa experimental station developed into a big scientific institution. On the bank of the Vakhsh, next to the first department of the Vakhsh State Farm, the Cotton Research Institute set up a zonal station, an active part in the work of which was taken by V. Krasichkov, one of the first cotton plant-breeders. He, and P. Artyomov, V. Petrov and other agronomist enthusiasts, had to overcome great difficulties to disprove the theory spread by enemies, that it was impossible to cultivate fine-staple cotton in the Soviet Union. That theory had to be disproved by practical results in plant-breeding. The zonal station had to have a seed-growing base. In

1935 the first department of the Vakhsh State Farm was converted into an independent farm known as the Semenovod (seed-growing) State Farm.

The rough, bare, arid and saliferous land that was assigned to this state farm looked as though nothing would ever grow on it. Sceptics jeered at the organizers of the farm and prophesied that nothing would come of their undertaking. But the specialists and farm workers vigorously set to work, levelled the ground, and cleared away the reed thickets. The ancient, crooked and abandoned irrigation system was reconstructed into a system of perfectly straight canals. The water from these new canals poured into the old, choked-up irrigation ditches with such force that there was no need to clean them out by hand. All the ditches were quickly cleaned. Year by year the salt that impregnated the hard earth was eliminated, and only in the hollows is it still necessary to combat salination.

This state farm became a model for the whole of Southern Tajikistan and acquired wide fame. Every new sort of cotton and every new variety of plant is first tested in the fields of the Semenovod State Farm before it is recommended to the collective farms for cultivation. The aim of the workers at the farm was, in conjunction with the workers at the zonal station of the Cotton Research Institute, to raise sorts of cotton which would be immune to disease, adapted to the local soil and climate, and yield big crops. The seeds of the new sorts grown by the zonal station were passed on to the state farm. In the spring the seeds of each sort were planted by hand in separate rows in a field.

These plantings are called "élite." The fate of a new sort of cotton depends upon the success or failure of the shoots in each of these rows, upon whether they thrive and ripen or not.

An élite is a treasure, the promise of a bright future. Nobody is allowed to go on an élite plot except the specialists, the most experienced "élite growers," who are entrusted with the task of tending the new sort that is growing under ordinary field conditions, but on a high level of agrotechnics.

The seeds collected from each row are subjected to a careful analysis in the state farm's laboratory, and only those which possess the proper-

ties most characteristic of the new sort are planted in the following year. The seeds collected from the plants of the new crop are called the first reproduction, and only in the third year, after every possible test and trial, is the new sort planted in the fields of the collective farms in the Vakhsh Valley.

The "Egyptian" disappeared from the fields of the collective farms in the Vakhsh Valley long ago. "Pima," "Maarad" and other imported sorts, whose hardiness and yield failed to satisfy the collective farmers of Tajikistan, have been replaced by the far superior new sorts raised by Soviet plant-breeders. Their yield is higher, their fibre is longer and finer, they are adapted to the local climate and other conditions. The very name "Egyptian" has been forgotten by the people. The Soviet sorts of cotton are simply called "fine-staple," and each sort is known by a number.

In 1948 alone the Semenovod State Farm tested six new sorts of cotton.

This farm, however, is not only a cotton laboratory, it is a big economic enterprise. The three hundred and twenty hectares of cotton plantation are only a small part of its extensive fields. Every year the farm receives a definite state plan for the delivery of industrial raw materials; it usually undertakes to fulfil a much larger counter-plan and succeeds.

In the first year of its existence the Semenovod State Farm grew cotton that had a yield of nine centners per hectare; but ten or eleven years later its average cotton yield was 26.5 centners per hectare, and on twenty hectares the average yield was 60.1 centners per hectare, an extraordinary figure for fine-staple cotton. The average cotton yield in 1948 was 33 centners per hectare, but since 1951 a yield of 40 centners per hectare has been regarded as normal.

This state farm also serves as a testing ground for new fertilizers and machines: the powerful S-80 caterpillar tractor hauling two five-share ploughs was tested there, and it ploughed to a depth of thirty centimetres.

The new forms of organizing farm work that were introduced at the Semenovod State Farm, such as working to a monthly plan-schedule

and others, were soon after adopted by the neighbouring Vakhsh, Kurgan-Tyube and Kirov State Farms, and later by all the other state farms in the Vakhsh Valley.

All the latest innovations in agrotechnics are tested and employed at this farm.

In addition to cotton plantations, the Semenovod State Farm has plantations of mulberry-trees, acacia, ailanthus and elm, and many fruit and oil-bearing crops never before grown in the Vakhsh Valley. Eucalyptus-trees from the Caucasus are adapted to the local conditions, and citrus-trees already bear fruit here.

Y. Voronin, an agronomist, the manager of the Semenovod State Farm, the élite-grower Sharif Ulfatov, and a number of other members of the staff, have been awarded the title of Hero of Socialist Labour.

In the course of twenty years or so, the agronomists Krasichkov, Parishkura and Tishchenko, who started work at the Jilikul cotton-alfalfa experimental station set up in 1930, have become celebrated scientists. To them belongs the honour of raising Soviet fine-staple cotton.

One of the most important problems demanding complete solution in the Vakhsh Valley is that of combating salination of the soil.

The task of drawing up a soil chart of the Vakhsh Valley, of studying the soil and of devising methods of increasing its fertility was undertaken by a soil reclamation station which in 1951 was converted into an institute for the study of soil science, land reclamation and irrigation. The entire population of the Vakhsh Valley had to put in an enormous amount of labour to make the sterile land fertile and then to keep it in a condition fit for growing cotton. Under the direction of highly experienced specialists, the collective farmers grew grass, washed the soil and dug a network of collectors to drain away the saline subsoil water; they richly fertilized the land with dung, humus, ditch and river silt, the ground-up remains of the adobe fences, and lastly, with mineral substances; they systematically ploughed the land over and over again; they carried out excavator work and other methods of restoring the fertility of saliferous and marshy land. Very much has been done, but much has still to be done in order fully to

solve this extremely important problem.

A characteristic feature of agricultural work in the Vakhsh Valley is the close and friendly collaboration between the collective farmers and scientists. Agronomists, plant-breeders and soil scientists are heartily welcomed at the collective farms. The Scientific Council of the Cotton Research Institute Zonal Station often holds its sessions at collective farms, and the results of those sessions are summed up and communicated to all the collective farms in Tajikistan.

Considering the enormous progress made in increasing cotton yield per hectare should we be surprised when we see fine-staple cotton plants bearing as many as 1,005 bolls? Such a plant, in addition to other plants bearing 700 and 800 bolls, was grown by Young Communist Leaguer Buri Rajabov at the Road to Socialism Collective Farm in the Kuibyshev District. The weight of each of the bolls that were the first to open on this plant, which was two metres high, was four grams. This plant alone yielded nearly five kilograms of raw cotton—enough to make twelve metres of cotton cloth!

3

As is the case all over the republic, in Southern Tajikistan, and in Kurgan-Tyube in particular, industry is developing rapidly. Quite a number of ginning mills, oil mills and other plants have been built. The livestock in this part of the republic is also multiplying quickly. In particular, in the semi-desert valleys of the low mountains karakul sheep thrive well. Two state karakul sheep farms, the Yakodin and Kabadian State Farms, have long been famous in the Vakhsh Valley. Every year these state farms obtain thousands of highly valuable karakul lambskins. The Frunze Collective Farm on the Kum Sangyr plateau is also famous for its karakul lambskins.

As is the case in all the fertile valleys of the republic, in Southern Tajikistan there are numerous vineyards and orchards. The Kurgan-Tyube State Vineyards grow excellent sorts of grapes. Apricots, peaches, apples, pears and mulberries grow in all the collective farms.

Quinces are grown to a lesser extent, but the people are very fond of them. In the southern valleys melons ripen early, and Vakhsh melons and water-melons are the first to appear at the fruit-shops and in the bazaars in Stalinabad. The slopes of the low mountains in Southern Tajikistan are covered with pistachio, hazel and hawthorn groves. Owing to the dry soil they are rather sparse, but the total area they occupy runs into tens of thousands of hectares. In many parts of Southern Tajikistan grow wild grapes, pomegranates, almonds, sugar cane, pears, apples, medicinal plants and volatile oil-bearing plants.

The climate of the southern districts provides unlimited possibilities of utilizing these wild plants and of cultivating plants which are now rare, or quite absent, in these parts and are abundant primarily in the subtropics.

During the past fifteen years the All-Union Arid Subtropics Research Institute has been studying oil-bearing plants such as flax, sesame and castor oil; valuable fibre plants such as dog-bane, ramie and woodwaxen; esparto grass from which excellent paper is made; various kinds of rubber- and resin-bearing plants; fig, and Japanese persimmon.

Extremely interesting also is the new work conducted in the Hissar Valley and in Southern Tajikistan by Stalin Prize winner E. Podgurskaya to increase the yield per hectare and the oil content of sunflower, flax and sesame.

The Vakhsh Zonal Station is cultivating a new sort of sugar cane, and it sends specimens for cultivation to all the collective and state farms in Tajikistan. American scientists scoffed at this "new fantastic idea of the Communists of growing in their country the plants of Jamaica, Cuba, Brazil and the Philippines," but they have stopped jeering now. In 1949 State Distillery No. 4 in Stalinabad distilled its first large consignment of rum from Soviet sugar cane. The rum proved to be excellent. The yield of green sugar-cane mass obtained at the Vakhsh Zonal Station beat the record; it amounted to two hundred tons per hectare.

There, too, for the first time in Central Asia, experiments were made in cultivating citrus fruits in trenches. The new Soviet "trench method"

Pomegranate picking in the orchard of the Vakhsh Zonal Station

First picking of tangerines at the experimental station of the All-Union Arid Subtropics Research Institute

Day nursery at the Molotov Collective Farm, Kurgan-Tyube District

Tractor drivers studying diesel engines at a machine-and-tractor station

enables the lemon and orange trees to obtain the warmth retained by the deep strata of the soil. The lemons grown at the Vakhsh Zonal Station are excellent, and lemon-tree seedlings are sent from here to collective and state farms not only in the southern but also in the northern districts of Tajikistan. In 1949 over twenty-five thousand lemon-tree seedlings ordered by the Vakhsh Zonal Station were sent from the Caucasian coast and planted in twenty-three districts of the Stalinabad, Leninabad and Kulyab regions. The seedlings thrived, and lemon-trees are now growing in the northern, western and southern parts of the republic where they were unknown until 1948, and the collective farmers cannot speak too highly of them.

The word "efflorescence" in the literal biological sense of the term characterizes the transformation of Tajikistan into a vast orchard containing the most wonderful, rarest and most highly valued plants of most luxuriant growth.

In three or four years' time all these crops will have become necessities of life for everybody all over Tajikistan. Just as today the people of Stalinabad cannot picture the streets of their city without their arborical arches, and just as the people of the Vakhsh Valley have almost forgotten that twenty years ago their extensive white cotton fields were a barren desert, so in the very near future the collective farmers living in the hot, fertile valleys will be unable to picture the gardens around their houses without lemon and orange trees.

Much is being done in the Vakhsh Valley but a great deal of work has still to be done to make the valley give the Tajik people all that can be obtained from its fertile soil and beneficial climate.

In conformity with the new Fifth Five-Year Plan all this will be done.

Recall the letter the young agronomists wrote in the lifeless Panj desert in 1927:

"Our imagination is working well. We are already picturing to ourselves big 'Egyptian' state farms in the valleys of the Vakhsh and Panj, tens of thousands of hectares covered with snow-white cotton blossoms. . . .

"When will that be, comrades? We do not know, but, of course, it will be. . . ."

Now it is, and has been a long time; and on a much larger scale than the Young Communist Leaguers of Sarai-Kamar dared to picture to themselves. The Tajiks inhabiting the banks of the Vakhsh and Panj had dreamed of this for thousands of years. But they dreamed in vain, because this could not be done under the state systems that then prevailed. But the Soviet system was established—and in a short space of time the dream the people had dreamed for thousands of years came true.


DARVAZ
AND
KARATEGIN

1

THE KULYAB REGION lies only on the spurs of the Pamir mountain system; the whole of it slopes downwards, as it were, from the eternal snow to the subtropical lowlands.

The whole of it, except the Kulyab and Boljuan districts, is part of Darvaz, a geographical term preserved from olden times when Darvaz was a country ruled by the khans and later by the beks of Bukhara, just as Kulyab and Boljuan and the adjacent vast high-mountain region of Karategin were under the rule of these despots. At the present time Karategin together with the rest of Darvaz, the high-mountain part, comprise the Garm Region.

The administrative centre of Darvaz was Kalai-Humb, lying, as it were, at the bottom of a test glass in a rocky gorge on the steep bank of the river Panj. The administrative centre of Karategin was the tiny city of Garm squeezed in by mountains on a steep terrace overlooking the river Surkhob, as the middle course of the Vakhsh is called.

The Garm Region is entirely a mountain and high-mountain region. Its eastern part takes in half of the highest peaks and glaciers of the North-Western Pamirs, its border stretching from the Gorno-Badakhshan Autonomous Region along the edge of the Academy of Sciences Range and along the Darvaz Range, behind which the turbulent river Vanch rushes down from the glaciers. In the south it is bordered by the river Panj which hemmed in by gorges rushes madly between the two states—the U.S.S.R. and Afghanistan. Here the river writhes in fury like a snake caught by the throat, trying to release itself from the stone fingers that are strangling it. This it succeeds in doing only near the so-

called Chubek Valley, where the mountains open out and diminish in height.

The Garm Region lies in the very middle of Tajikistan, and it, too, slopes down from the east, from the highest, uninhabited Pamir Mountains to the west where the mountains are fairly well populated although they are still very high.

It is a region of non-irrigated farming and pastures: agriculture and livestock breeding are the chief occupations of the inhabitants. Cut up by narrow valleys and the gorges of swift, turbulent rivers, divided by the highly ramified mountains into hundreds of small and minute oases which are difficult to reach at all times and are isolated from each other in the winter, when the passes are blocked by snow, and having a diversified climate, the economic development of the region naturally lags behind that of the other regions of Tajikistan with which we are already familiar. But here, too, socialist construction is in full swing, and much has been done during the twenty years or so the Tajik Soviet Socialist Republic has been in existence.

A great deal was done particularly after 1940, when a motor road, the Stalin Pamir Highway, was laid across the whole region running through Komsomolabad, Tavil-Dara and Kalai-Humb to Horog. And other roads were laid in addition to this main road.

These roads are constantly threatened by landslides and avalanches. Not only the roads are threatened, however; Karategin and Darvaz are situated in a region of very frequent, if not constant, earthquakes. These earthquakes are being studied by a network of seismic stations set up by the Stalinabad Institute of Seismology, the aim of which is to work out a scientific system of forecasting the earthquakes that threaten various districts of the republic. This problem is nearing solution.

Near Kulyab the arms and channels of the Panj form a multitude of islands. In the flood season some of these islands are washed away; they vanish and appear in new places. Others, the permanent ones, are overrun with reeds, tal, oleaster and sedge. Two big islands—Urta-Tugai and Darkot—stretch for tens of kilometres between the main arms of the Panj. Both these frontier islands are jungles, the haunts of tigers,

wild boars, lynxes, jackals and wild birds. In 1950 the new Chubek District was formed here and those jungles on the Panj are being cleared away. With the aid of powerful S-80 tractors the virgin soil is being ploughed up and the reeds cleared away. On the newly-ploughed land cotton and jute are planted, and orchards are being laid out. The former isolated kishlak Chubek, now the administrative centre of the district, is rapidly growing into a big, well-appointed town.

At the present time, when the population of the region has become prosperous, when Soviet culture has spread to the most remote kishlaks, when there are few collective farms in the republic which have not a medical centre, when there are more than a hundred and fifty hospitals and over four hundred polyclinics and dispensaries in the republic, the former scourges of the population of Tajikistan malaria and recurrent typhus have almost vanished, and here, too, in the Chubek Valley cases of infection with these diseases are growing fewer year by year, and cure is guaranteed by Soviet medicine.

Before the revolution cereals were almost the only crops cultivated in the Kulyab Region; they occupied 94 per cent of the total crop area, and they were mainly non-irrigated. The collectivization of agriculture facilitated the repair of the irrigation system, the expansion of the cultivated area and the general progress of the region. Cotton and oil-bearing crops—flax and sesame—are now important items of the husbandry of the region, and vine and fruit growing has developed, particularly in the warm valleys of the Parkhar, Kulyab and Muminabad.

In those districts are concentrated 80 per cent of the vineyards and orchards in the region, and in the southern parts the cultivation of subtropical industrial crops is now being developed. Quite lately the cultivation of citrus fruits was begun.

Kulyab, formerly a filthy, dusty kishlak, is now a small, but cultured garden city with streets shaded by giant plane and poplar trees, with new, white houses gleaming through the foliage of the trees surrounding them, and irrigation ditches rippling everywhere.

In the town there is an oil mill and a cotton-ginning mill, one of the first to be built in the republic. The output capacity of the ginning mill is increasing year after year, and nearly all the operations in it

are mechanized. The municipal factory manufactures consumer goods in demand by the local population, such as "muki," the soft boots worn in the mountain kishlaks.

In the town there is also a Teachers' Institute and a pedagogical school, which train school teachers not only for the Kulyab Region but for other regions too. Over forty thousand children attend the numerous elementary and secondary schools in the region.

In the town there is a Tajik theatre, two cinema theatres, an open-air cinema theatre, a recreation park, and a Young Pioneers' Park. Two newspapers are published which circulate throughout the region. In 1952 a hydro-electric power station was built which doubled the town's electricity supply. Aircraft passengers daily arriving in Kulyab put up at the hotel. In the near future the inhabitants of the town will hear the engine whistle of the first train that will arrive from Kurgan-Tyube on the narrow-gauge railway.

When that railway starts running the industrial development of the whole of the Kulyab Region will make rapid strides, for this development has been retarded up to now by transport difficulties. So far, besides the mills in the town, the only industrial enterprises in the region are a cotton-ginning mill, an oil mill, a machine-repair workshop, a few handicraft workshops and small food factories. Agriculture in the region, however, is rapidly being mechanized; there are already ten machine-and-tractor stations and a machine station which serves livestock farms.

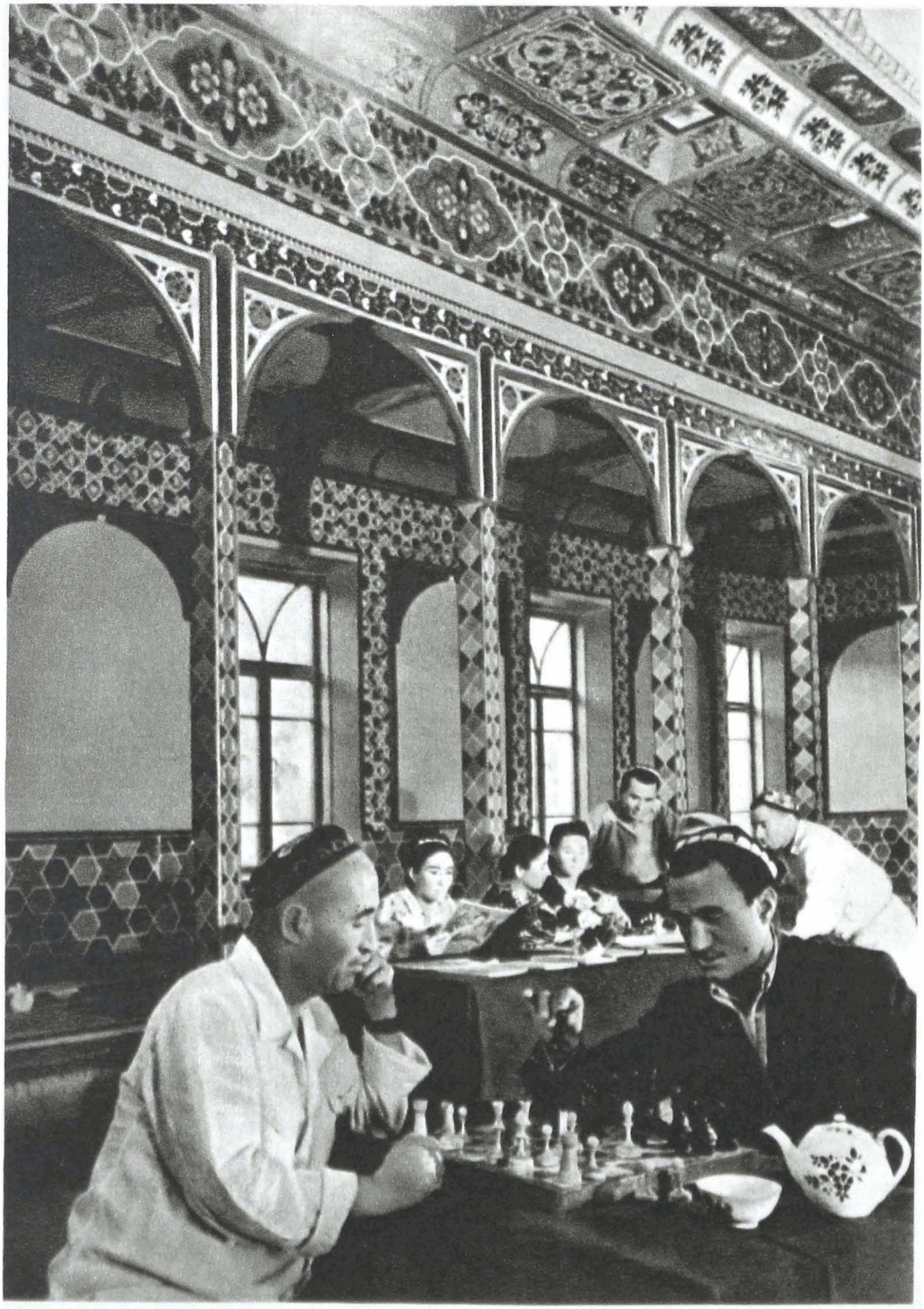
The Kulyab and Garm regions are fairly rich in mineral deposits.

Near Kulyab tower Hoja-Sartis and Hoja-Mumin. These two mountains are the biggest salt cupolas not only in the U.S.S.R., but in the world. Their salt deposits are enough to supply the needs of the entire population of the globe for hundreds of years.

If the mining were properly organized it would easily be possible to obtain hundreds of thousands of tons of salt per annum.

At present the salt is mined in a primitive way, but the development of salt mining here will begin as soon as the railway is completed.

Where there is salt there is often subterranean gases, and there are numerous abundant gas accumulations here. All these gases are now



A collective-farm tea-house

A collective-farm apiary. The hives are moved to cotton fields, hayfields and orchards as required

A secondary school (ten-year course) in Horog

being studied. Scientific investigation has shown that the Kulyab District is one of the biggest gas-bearing districts in Tajikistan.

As soon as the big Ak-Gozy electric-power station in the Vakhsh Valley is completed it will be possible to supply the Kulyab Region with electric power for industrial purposes. This will make it possible to obtain chlorine and caustic soda by the electro-chemical method. The time is not far distant when our country will receive from the Kulyab Region magnesium chloride, magnesium sulphate, potassium salts, bromine and other salts, obtained hardly anywhere in Central Asia.

For ages past Darvaz, with its large formations of gold-bearing conglomerates, was known for the primitive mining of gold. Incidentally this is also true of the other mountain and high-mountain regions of Tajikistan.

After the revolution people all over the republic told Soviet scientific workers about the existence of mysterious, ancient, carefully masked workings, at which gold had been mined under great secrecy. That happened in Pamir, in Darvaz and in many other mountain districts. Thanks to the lively interest taken by the people, very much has been done to develop the gold-mining industry in Tajikistan.

Not far from Boljuan, deposits of asbestos have been found, and in other parts of the region there have been found deposits of coal, oil, lead, various building materials, and peat.

Many useful minerals have also been found in the Garm Region: various metals, salt, clay and coal. To develop these it is necessary to lay good roads through the deep gorges and high mountain passes of this region which is so difficult of access.

Although at present poor in means of communication, the Kulyab and Garm regions—Darvaz and Karategin—will soon catch up in industrial development with the advanced industrial regions of the Tajik Republic.

2

Here in the south the best horses for travelling in the mountains are those of the wiry and tireless Lokai breed. That breed is famous, and it is raised in the Yavan District.

Travelling on horseback up the river Kizyl-Su, along the valley running between fairly low mountains and through kishlaks and orchards, you will see gentle slopes on each side of you. In the hot summer-time they are of a faded, yellowish colour, and those in the distance are violet.

Behind the ridge, in the west, lies Dangara. The reddish water of the Kizyl-Su spreads widely through the valley. The mountain sides are smooth and sloping. The fields of waving wheat look like a heaving golden sea. In the distance the chugging of motor engines is heard—harvesting is in full swing. Nearly three-fourths of the crop area in the Kulyab Region is taken up by wheat, barley, sesame and flax. In 1949-51, many of the mountain slopes were for the first time planted with non-irrigated cotton.

Quiet reigns here in the summer-time. At the numerous collective farms the crops stand high and evenly. Nearly everywhere in the republic the grain-growers plant only high-grade crops, and the grain yield per hectare is increasing year by year.

The time is forgotten when the dehkans in the valley bent their backs reaping with scythes. That is done now only where the steepness of the mountain sides prevents the hauling of modern agricultural implements to the fields. Here, in the flat parts, in the valleys of the Dangara and Kzyl-Mazar, the machine-and-tractor stations reap the crops of all the grain-growing collective farms with the aid of tractor-drawn and self-propelled harvester combines.

In some districts in Tajikistan threshing is still done in the old way by oxen, but that is because it is not possible everywhere to haul threshing machines over the mountain tracks, for the further east you go the steeper are the mountains; the fields are smaller, they are cut up by the precipitous gorges and formidable piles of rock.

The villages scattered on those mountain sides seem to hover in the boundless sky over the visible world. Far down below small rivers wind their way. Sheep and goats graze in the green meadows roaming up the curved slopes. A large flock of sheep has reached the very watershed and, blocking the road, the sheep disturb the silence of the mountains with their bleating.

Hornless, hook-nosed heads, long thin ears, muscular necks and broad, protruding chests—such are the Hissar sheep bred for both meat and wool. They are big and hardy, adapted to the stern conditions of distant mountain grazing. In the course of four or five weeks they cover five and six hundred kilometres over the mountains in their annual trek from their collective and state farms to the summer pastures where the alpine grass is thick and succulent.

The driving of flocks and herds to distant pastures plays an important part in livestock farming in Tajikistan. It is conducted on a scientific basis and is assuming forms that are possible only under the socialist system of economy.

Before the animals are driven to the summer pastures considerable preparations are made at the collective and state farms. The shepherd teams are reinforced; a route and time-table is drawn up for every district, collective farm and state farm; all the animals are subjected to zootechnical and veterinary inspection; inspection posts are organized at different points along the route and the supply of medicaments is arranged. In the summer pastures camps are organized with recreation clubs, tea-rooms, medical and veterinary centres, shops and radio stations. During the summer grazing the collective farms must fulfil their milk-yield plan, get a good increase in weight of lambs and calves, and good fattening of all the animals. To achieve this many collective farms feed their cattle even at night in the pens, they milk cows four times in twenty-four hours, and on hot days they give them fresh grass and salt. And the chief thing is that measures are taken to have the cattle evenly distributed over the pastures, and the pastures are restored and improved: weeds are mowed before they begin to flower, stones are removed, the pastures are watered by "flooding," some parts are harrowed and sown with wild grasses.

In the autumn the collective farmers in the Dangara, Kzyl-Mazar and many other valleys in the Kulyab Region make preparations to receive not only their own cattle returning from the summer pastures, but also the cattle driven here for the winter from the Garm Region, Matcha, and other mountain districts.

Here, in Dangara and Kzyl-Mazar, cultural and economic centres are being built—small settlements with schools, recreation clubs, shops, radio stations, concrete dringing pools, and large stocks of fodder.

... Slowly making his way through the flocks he encounters along the road, the mounted traveller sees here and there down below adobe squares and oblongs; those are the fences of the collective livestock farms. They have stocks of fodder collected from the spring mowing. Hundreds of collective farms in the Kulyab, Kzyl-Mazar, Sary-Hasor and other districts are engaged in fulfilling an important state task, namely, to increase the output of animal produce.

Deliver to the state more meat, milk, butter and wool! There is not a district, not a collective farm in the mountains, which is not striving to do that. Prepare more fodder, cart it to the winter pens and lay in reserve stocks! Ensure sufficient supplies for the butter factories; load the big Stalinabad meat-packing plant to full capacity! Reduce cattle mortality to the minimum. There must not be a single barren cow, and every calf must be saved and reared! Every family in the collective farm must have a cow of its own! For that special purpose the state in 1949 granted the collective farmers in the Kulyab Region alone credits amounting to four hundred thousand rubles. There are three thorough-bred livestock farms in the region, and every collective farmer wants to have thorough-bred cows!

Such are the thoughts that run through the traveller's mind as he winds his way along the road high up above the world. And everywhere down below on the near and distant slopes there are curved, straight and radiating yellow strips of ripening non-irrigated crops.

Only a few motor roads run through the narrow valleys of the Garm Region. All the other roads are mere tracks which can be travelled only on horseback, or on asses, and then not everywhere. When climbing to the passes, the traveller must dismount, because his horse or ass cannot stand the strain. Care must be taken not to slip, for now to the right, and now to the left, there are yawning chasms many hundreds of metres deep.

Here, too, there are grain fields on the slopes, but they are smaller and separated from each other by inaccessible crags; from a distance it

seems as though those fields are sloping so sharply that it is impossible to stand up in them!

The geographical name of this part of the Garm Region is Karategin. Until very recently Karategin—ancient Rasht—was one of the least explored parts of this mountain borderland.

After his long wandering over mountain tracks the traveller comes on to a motor road and draws near to Garm. Already in the 1930's the small town of Garm became a large, well-populated city, the cultural, political and economic centre of the vast territory of Karategin and Darvaz which is covered by the Garm Region. In recent years, however, the narrowness of the valley in which Garm is situated increasingly hindered the city's development. Consequently in 1949 the Regional administrative offices were transferred to the near-by kishlak Shulmak situated in a relatively wide valley. By that time the kishlak had grown into a city much more spacious than Garm. Soon after, that town was renamed Novabad.

3

In the Tajikabad, Garm and Kalai-Humb districts there are many collective farms situated far above the clouds. Here too, on these heights, collective farmers sitting at camp-fires discuss with agronomists questions concerning plant-breeding, the raising of frost-hardy and early-ripening barley, how to adapt the fruit crops of the warm valleys to their high-mountain climate.

No matter where a kishlak may be situated, provided it is below the snow-line, there are sure to be orchards there. Mulberry and apple grow everywhere here too.

There are still few orchards and vineyards in the Garm Region, every effort is being made to cultivate them, and already among the fruit-growers there are no few Michurinites. Figs, pomegranates and persimmon grow well in the Kalai-Humb and in the Nulvand districts of the Kulyab Region. In the gorges of Darvaz and Karategin walnuts and almonds are plentiful. The Garm Region holds second place in the republic for the supply of walnuts. Trees are entirely absent only in the kishlaks situated in the highest valleys where the wind is constantly

blowing, the soil is dry, and where the inhabitants obtain water solely from small mountain springs. Such is Sagyrdasht, the kishlak situated above the clouds in the Tavil-Dar District, and many more kishlaks in the high-mountain part of Darvaz.

The kishlak Sagyrdasht is situated on a high, stern plateau between the passes to Tavil-Dar and Kalai-Humb. In the pass at a height of 3,500 metres above sea level there is a meteorological station. An immense vista spreads out to the gaze of its inhabitants. The landscape looks like a stormy sea suddenly frozen: nothing but valleys, gorges, and the crests of mountain chains.

This kishlak had long been known to all the scientific expeditions which returned by the caravan route from Pamir to Stalinabad. How could they forget it? People and pack-horses were almost exhausted climbing the slippery, perilous track through dense clouds to the Hobu-Rabat Pass adjacent to the kishlak! The fields of Sagyrdasht were never in the past distinguished for their fertility, for they lay almost on the outer border of the high-mountain agricultural zone. Often the crops here perished from early frost, and, in general, the yields were small.

Today, however, Sagyrdasht is regarded as the granary of the high-mountain Tavil-Dar District. The collective farmers here gather the biggest harvests in the Garm Region.

How is this to be explained?

In 1928 Ivan Stepanovich Ivanushko was called up for service in the Red Army and he served his term in Tajikistan. While there he grew to love that mountainous country and its people, and on his discharge from the army he decided to remain there. For six years he worked as an agronomist and machine expert and was later appointed district agronomist in Kongurt, in Dagan-Kiik. In 1940 he was transferred to Tavil-Dar. He had a good idea of what had to be done to raise the agricultural techniques at the collective farms here to a higher level, and so he set to work to breed frost-hardy, early-ripening sorts of grain crops. The Great Patriotic War broke out, however, and the work was interrupted. But even during the rigours of the war Sergeant Ivanushko remembered Tavil-Dar, and on returning to peaceful labour he resumed his functions as an agronomist there.

The collective farmers welcomed him as their own brother, but they told him that the early-ripening, frost-hardy sorts of wheat and barley he had raised had perished from frost. Among the perished plants he found some wheat plants which contained well-ripened grains and studied them carefully. He found that the "ablak" wheat was a hybrid, that the late-ripening "surkhak" suffered from early frost, and that the "safedak" was a quick ripener and therefore was not afraid of frost. He investigated the local varieties of barley in the same way.

The way to raise quick-ripening, frost-hardy wheat was discovered.

Ivanushko also found that the local spring wheat produced a bigger yield than the winter wheat, but in putting away grain for seed the collective farmers mixed the two varieties. The agronomist induced the farmers to keep the two varieties of seed separated and to sow each in its proper season. At last he achieved success. The spring wheat became more and more frost-hardy, and the yield of the winter wheat increased.

The improved wheats and barleys of Sagyrdasht proved quite suitable for high-mountain cultivation.

And all the collective farms in this area are now famous as the raisers of the biggest crops in the Garm Region. Wealth came to the collective farms situated above the clouds, and they could now afford to buy elsewhere building materials, which are unobtainable in the district, to build houses that kept out the cold of winter, to increase the flocks and herds, to cut roads in the rock that bordered the plateau, and instead of dreaming fruitlessly of trees to buy from plant-breeders seedlings of fruit-trees that grow at high altitudes and to begin what had never been done before—to plant orchards above the clouds, the orchards without which life in the mountains is dreary for the Tajik.

And this also shows that the friendship between the Tajiks and the great Russian people is assuming ever new forms, which spring from joint labours fostered by science.

In Shakhristan, the granary of Northern Tajikistan; in the mountains of Zeravshan and Yagnob, which supply grain to Penjikent; in the Yavan District and Dangara, which supply wheat to the whole of Middle and Southern Tajikistan; in Darvaz and Karategin, the grain

centres of the republic; in the Pamir gorges of Gorno-Badakhshan—wherever grain grows, Russian, Tajik, Ukrainian and Uzbek agronomists are co-operating with the collective farmers; they are probing the secrets of nature and together with the entire people are transforming it.

In every kishlak in the mountains every decision of the Party and the government concerning measures for increasing crop yield is earnestly discussed by all the inhabitants, Party and non-party, men and women, old and young. Every inhabitant of the mountains now knows what plant-breeding is, knows about the planting of tested seed, and about the agrotechnical calendar. At every collective farm there is a seed-growing team consisting of the most experienced farmers. Terms like "seed-testing," "winter-hardiness," "seed-grower," "agrobiology" and many others have now gone into the ordinary vocabulary of the people and do not have to be explained.

In 1948 the first machine-and-tractor station was organized in the Garm Region and the first NATI and Universal tractors went into the mountains. They helped to plough and plant three thousand hectares of land where only a little while before mountain goats, fleeing from men, had leapt from rock to rock, sending down showers of stones.

Tractors cannot reach all the collective farms, of course. At many of them they use horse-drawn ploughs, seed drills, reaping, threshing and other machines. Only on the steepest slopes is the work done by hand.

Potatoes, unknown in the Garm Region before 1930, are now growing well there. Silkworm breeding is developing; fifteen per cent of the cocoons obtained in the republic comes from the Garm Region.

At the Engels Collective Farm in the Jirgatal District, the most remote district in the region, there is a hydro-electric power plant which supplies electricity to the district administrative centre. In all, there are already nearly twenty hydro-electric power plants in the region.

On the way to Pamir, crossing the threshold of Darvaz—the last passage opened by the Panj gorge into the Gorno-Badakhshan Autonomous Region—the traveller finds himself in the luxuriant orchard of Kalai-Humb, lying on a precipice, at the bottom of which the frontier river Panj rushes and roars turning the boulders in its way.

PAMIR

1

THE FIRST traveller to call Pamir by its proper name and to give a brief description of that country was the Chinese monk Hsuan Tsang who in the seventh century crossed from Badakhshan into Tash-Kurgan, the domain of Tzeban-To.

The next one to leave us a description of Pamir was Marco Polo, the Venetian traveller who passed through this country about the year 1270.

It was a dreary country that Hsüan Tsang and Marco Polo described, but for all that conqueror after conqueror came to possess it. It was conquered by the Tibetans and the Uighurs. In the thirteenth century Genghis Khan came close up to it, as did Tamerlane in the fourteenth century, and Abubekr-mirza in the fifteenth century. In the sixteenth century Sultan Babur included it in the Grand Mogol Empire he formed. In the latter part of the sixteenth century (1572) the Pamir regions of Vakhan, Shugnan and Rushan, together with Karategin, fell under the sway of the Emir of Bukhara, Abdulla-Khan, and were governed by his stepson, Sha-Kirgiz of Darvaz. In the seventeenth century the Jungars invaded Pamir every now and again, but the invaders were exterminated by the Chinese. The native highland people rose in rebellion against the invaders and expelled many of them.

In Western Pamir—Vakhan, Ishkashim and Goran—on the ancient trade route along the Panj, there are the ruins of the castles and forts of the ancient Siah-Posh people, or black-robed kafirs, who inhabited

that region. These people were fire-worshippers and wore black woollen garments. The ruins of the castle of the Siah-Posh king Zengibor in the kishlak Isor, in Vakhan; the fort Zamri-Otash-parast near the kishlak Ptup; the fort of the legendary Siah-Posh king Kaahka below the kishlak Namatgut and others, have not been thoroughly investigated by archaeologists to this day, although time has not destroyed their mighty walls. Associated with those castles are many legends about the fire-worshippers, about the conquest of the country by Ali, and about religious wars.

After Ferghana was transformed into the Khanate of Kokand, the Khans strove to extend their dominions to the Hindu Kush and Kashgar, and in 1832-34, Madali-Khan of Kokand subjugated Pamir and occupied the entire territory up to Sarykol and the right bank of the Panj.

In 1869, the western part of Pamir (Badakhshan) was occupied by the troops of the Emir of Afghanistan, Shir-Ali-Khan.

At that time the English were already making strenuous efforts to gain possession of Pamir, but in 1876 the Khanate of Kokand was abolished and its territory was annexed to Russia as the Ferghana Region. In that very same year the first Russian exploration expedition was sent to Pamir. Colonels Lebedev and Bonsdorf made surveys of routes and defined heights and astronomical points; Kastenko and Korostovtsev made surveys of Pamir and Alai. In 1877-78 the country was explored up to lake Yashil Kul by the zoologist Severtsev; up to Lake Kara Kul by the geologist Mushketov; and in Badakhshan by Colonel Matveyev. Later, up to 1891, explorations were made by the astronomer Putyata, by the mining engineer Ivanov, by the topographer Bendersky, by the botanist Regel, by Colonel Grombchevsky (who reached Kanjut and Kafiristan) and by the geographer Grum-Grzhimailo.

In those years Pamir was still an enigmatic country wrapped in mystery and legend.

In 1891 and 1892 detachments under the command of Colonel Ionov annexed Eastern Pamir to Russia, and from that time the region was called the Pamir District of the Ferghana Region. The district was governed by the commander of the Pamir Detachment, acting in the capacity of Uyezd Chief. The Region of South-Western Pamir, situated

along the Panj, was put under the rule of the Emir of Bukhara and was governed by beks. The local rulers and clergy were subordinated to the beks, while the Russian military administration merely exercised general supervision. In 1895 a Russo-British boundary commission established the frontiers between Russia and China, Afghanistan and—beyond the "Afghan corridor"—India. These frontiers have remained unchanged to this day.

In that period numerous Russian explorers visited Pamir, but except for a few main routes and separate districts, the region was still entirely unexplored. Utter confusion reigned even as regards its geography.

In spite of all the difficulties Russian travellers pushed forward with their explorations and gained more knowledge about the region, but it was the October Revolution that created the possibility of making an extensive and all-round investigation, as a result of which the "blank spaces" were entirely removed from the Soviet map of Pamir.

Only the people reared by the October Revolution could convert the perilous mountain tracks into convenient motor roads. In 1940 it was decided to build the Great Pamir Highway from Stalinabad to Horog 567 kilometres long. The technical difficulties connected with the laying of that road were unprecedented, and the work was estimated to take five years. It was to run over steep crags, through snowy mountains, across hundreds of dizzying precipices and scores of gigantic, creeping boulder stones in places never before trodden by the foot of man. Without this road the economic development of Darvaz and Badakhshan would have been impossible. The cost of transporting a single telegraph pole from Stalinabad to Kalai-Humb by pack-horses was a thousand rubles! Even school desks had to be transported in parts by aircraft. Every year the fruit crop in Kalai-Humb remained in the district owing to the lack of transport facilities.

Enthused by the prospects opened by the construction of this road the inhabitants of Darvaz and Pamir came forward with a counter-plan: to make this a people's undertaking and to complete it not in five years, but in a hundred and twenty days! In May 1940 twenty-two thousand collective farmers went out on to the track to help the workers and technical specialists. Six thousand tons of freight—explosives,

provisions and building materials—were transported to the scene of operations by aircraft and pack-animals.

In three and a half months two million cubic metres of monolithic crags, two million cubic metres of flat rock, and a million cubic metres of boulders were blasted and cleared away. On September 1 the first automobile passed through the Darvaz Gorge, and six days later the builders reported to Stalin that the whole road was open for traffic.

The fable told by the Tajik highlanders about the giant Palavon who shifted mountains with his shoulder came true. The road was laid in a hundred and ten days! The journey from Stalinabad to Horog became easy and safe, and it takes not a month, but two or three days! And this legendary country formerly isolated by wild mountains has become a cultured and flourishing region.

2

Eastern and Western Pamir differ sharply from each other in topography, climate and population.

The mountains of Eastern Pamir are smooth, their contours are soft, they have numerous deep hollows with no outflows, and between the mountain chains stretch wide, smooth valleys which had been ploughed by now vanished glaciers.

In these rocky valleys there are scarcely any trees, for in Eastern Pamir there is no point lower than 3,600 metres above sea level; here only dry teresken and different varieties of "cushion" plant grow, and only the floodlands of the rivers are enlivened by grass.

Many of the valleys are filled with rocky piles of moraine. In those valleys there are numerous lakes formed by melted glaciers. In some places the ice has remained under the soil. The ice does not melt evenly and as a result the ground is covered with hummocks and pits. The only area where no glaciers have been is that east of the Muzkol Range. Scarcely divided by watersheds, the East Pamir Mountains are smooth and round. A similar topography is to be found only in Tibet.

In these valleys at a height of four kilometres above sea level and only half a kilometre below the snow-line Kirghiz nomads lived from

ancient times, driving their herds from one sparse pasture to another, for not one of them could feed a large herd all the year round. The total number of East-Pamir Kirghiz families fluctuated between one and two thousand. Teits, Kipchaks, Naimans, Kadyrshes, Ottuz-Oguly and other Kirghiz clans were in constant strife over pastures. The local, high-mountain breed of long-maned Kirghiz ponies, extremely unexacting and wiry, helped the nomads to move very quickly—a hundred and more kilometres a day—and their tents and other baggage were carried not only by horses, but also by asses, camels, and above all by humped and shaggy yaks, which are adapted to the climate and rarefied air. These strong and intelligent animals can obtain their food from under the snow which they kick aside with their hoofs, and they are able to find subsoil water in desert areas and dig for it without the aid of man.

Conditions of life in Eastern Pamir are more severe than in the Arctic, where the air is less rarefied. In 1934, at the Bash-Gumbez Pass, a temperature of 51.2° C. below zero was recorded. The daily fluctuation of the temperature is extraordinary. On July 9, 1934, the temperature at the Pamir Biological Station at 13:00 hours was 33° C., but at 16:00 hours it was 6.4° C. below zero. Such sharp changes in temperature crack stones and crumble rocks.

In addition to wild sheep, the constant habitants of high mountains, in Eastern Pamir there are also numerous mountain goats, and in the lower valleys there are marmots, hares, martens and foxes.

Enormous vultures with a stretch of wing of as much as three metres soar slowly in the air, or sit on rocks, dark and motionless, like statues.

The nomad Kirghiz clans always strove to drive their herds from Eastern Pamir to the lower levels—northward, across the Zaalai Range to the luxuriant alpine pastures of the Alai Valley; eastward into China, and south-westward, to the upper pastures of Vakhan, Shugnan and Bartang.

The rivers which flow from Eastern Pamir to the Panj, breaking up, as it were, the topography of the mountains, gradually deepen their beds and transform them into gorges of increasing depth and steepness. The watershed ridges tower three to four kilometres over the bottoms of the gorges, and the streams that flow from these watersheds, in their

turn, cut narrow and deep gorges for themselves, running at right angle to the main ones. The entire topography thus becomes extremely rugged, cut up by innumerable precipices and chasms, some of which have a sheer drop of one and a half kilometres.

The ranges of Western Pamir were created by rivers and are therefore called not tectonic, but orographic. Their ridges are sharp and rugged; their summits—rocky peaks—are covered with snow and hanging glaciers.

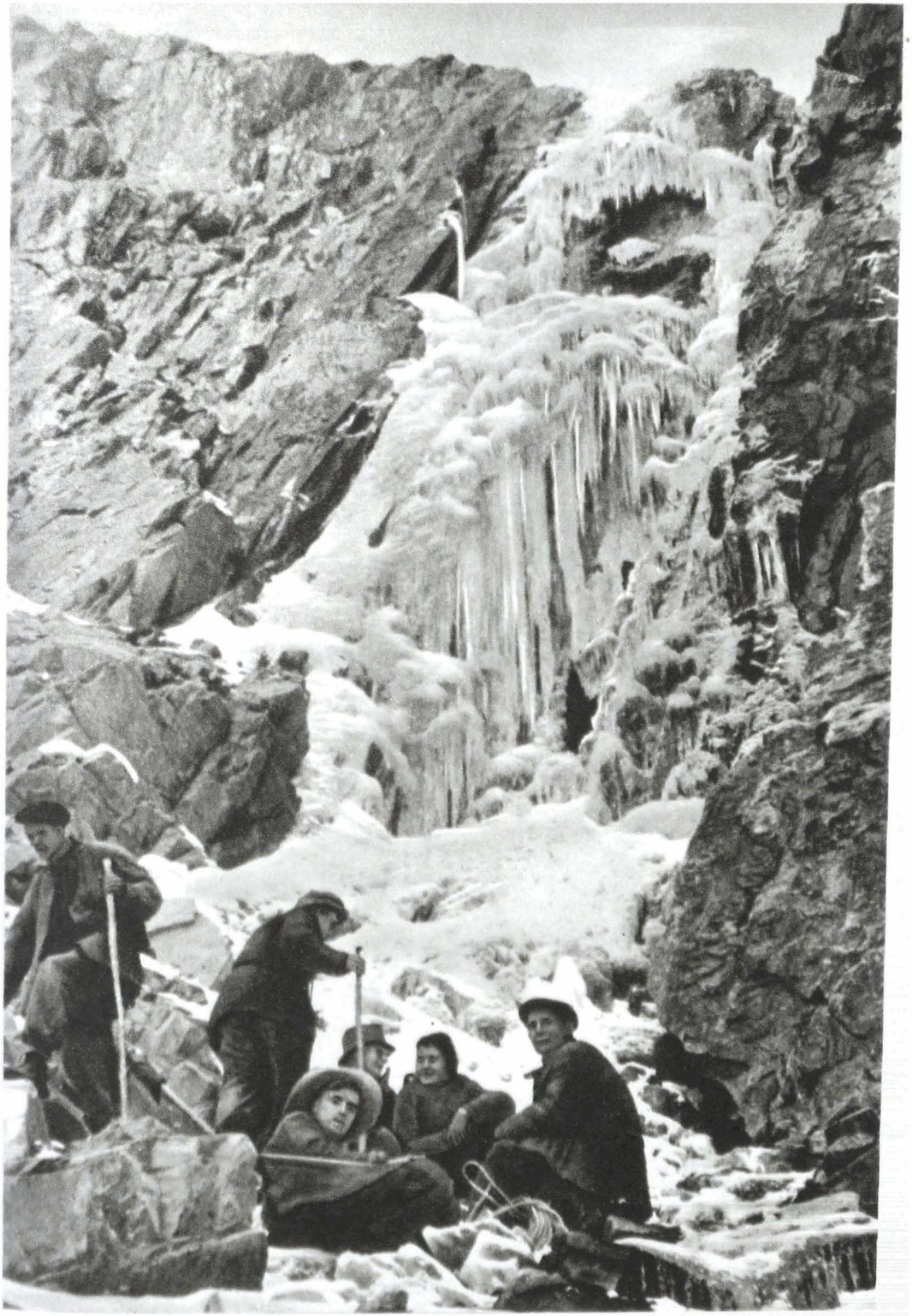
The rocks in the medium height zone are the haunt of the fierce snow-panthers, which attack goats and sheep. In the rugged mountains there are also the small Himalaya bears and wolves; there are also vultures and eagles, and falcons which the local inhabitants often tame. Exceptionally plentiful in the mountains of Western Pamir are various breeds of partridges and of mountain turkeys, which the inhabitants make so tame that they follow at the heels of their owners.

In the upper reaches of the Western Pamir rivers there are many alpine meadows; lower down juniper-trees appear, sometimes birch, and still lower down there are briar, honeysuckle and currant. Here and there the rocky slopes are enlivened by rhubarb; on the river banks there are thickets of tal, Sila buckthorn and small poplars. More and more often plots of land are met with planted with Himalayan gymnospermous barley, beans, peas, rye, millet and flax. Still lower down, in the orchards of the small kishlaks, the first apple, apricot and mulberry trees are growing. Here wheat is already grown.

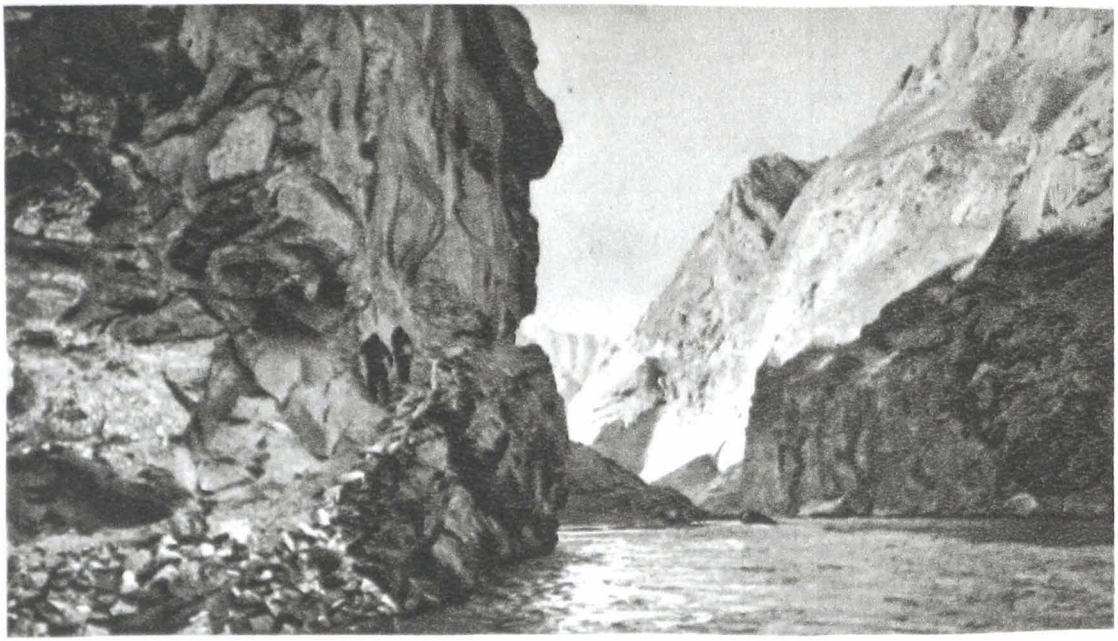
Every narrow valley in Western Pamir is taken up almost entirely by a river which in its onward rush does not leave on its banks the earth it washes away, but carries it down to its estuary and thus constantly deepens its bed.

For that reason the inhabitants of these valleys can settle only at the estuaries of these tributaries which heap their silt in conical piles at the exits of the gorges. All the small mountain kishlaks are exceptionally beautiful and picturesque.

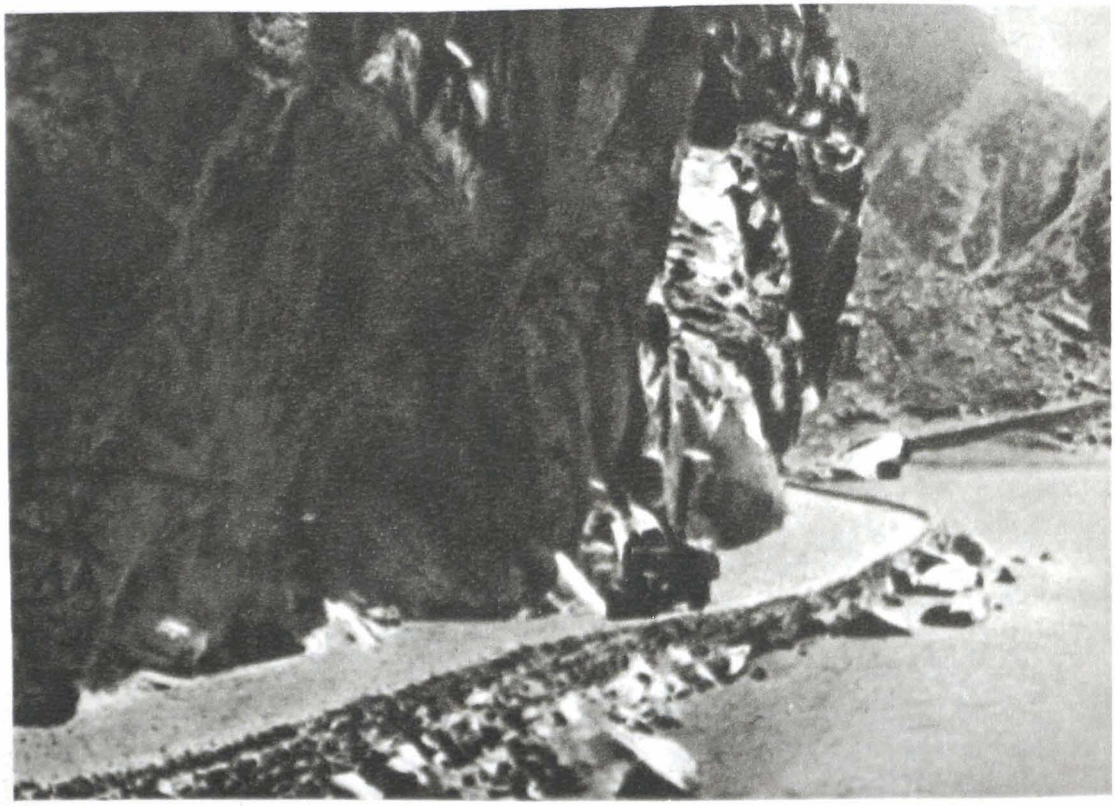
The settled clans which have inhabited Western Pamir since the days of antiquity have always been known for their industriousness. With extraordinary courage and perseverance they overcame the sever-



Students of the Moscow University on an expedition in the Pamir Mountains taking a rest while climbing a nameless peak



A footpath in the Pamir Mountains



The Stalin Great Pamir Highway, formerly a footpath

ity of nature, dug canals, laid tracks, built bridges across rivers, and won from the rocks every patch of ground fit for cultivation. In their tireless labours they strove only for peace, as every toiler does.

Those clans which long inhabited Badakhshan, each in a separate area bordered by mountain chains—Vakhan, Ishkashim, Goran, Shugnan, Rushan, Bartang and Yazgulem—and each speaking its own dialect, collectively called themselves Highland Tajiks, differing from the other Tajiks only in regard to language.

The Gorno-Badakhshan Autonomous Region is divided into seven districts: Shugnan, Ishkashim, Rosht-Kala, Rushan, Bartang, Murgab and Vanch, which formerly belonged to Darvaz and now unite the basins of the rivers Yazgulem and Vanch and the adjacent bank of the Panj up to the river Darai-Pshikharv.

Horog, the administrative centre of the region with a population of several thousand, is situated in the narrow valley at the junction of the rivers Shah-Dara and Hunt, both of which fall into the Panj.

The climate of Western Pamir varies considerably, depending upon the height above sea level of any given area, but on the whole it is less severe than that of Eastern Pamir, and in places, in the deep valleys protected from the wind at heights ranging from 1,700 to 2,500 metres above sea level, it is relatively warm and beneficial.

Fruit-trees—apple, pear and apricot—fruit well in Western Pamir. Mulberry-trees are plentiful, and, as was the case in Zeravshan, Darvaz and Karategin, in the past mulberries were one of the staple foods of the highlanders.

Since ancient times the Pamir Mountains have been famous for their mineral deposits—gold, pink spinel (the so-called Goran "ruby mines"), mountain crystal, garnet, asbestos and iron ore (mined by primitive methods in Vanch). Many of the deposits were known all over the Orient ten centuries ago, but in the nineteenth and beginning of the twentieth century they were either abandoned and forgotten, or were so little exploited that they lost practical importance.

Soviet expeditions have discovered in Pamir many new deposits of non-ferrous and rare metals, piezoquartz and mica.

In 1930 in the upper reaches of Badom-Dara, a tributary of the Shah-

Dara, above the little river Lyajuar-Dara, in the region of Mayakovsky Peak discovered by the writer of these lines in 1931, he, in conjunction with the geologists Yudin and Khabakov, after long and persevering search, found the legendary deposits of lapis lazuri which according to tradition were exploited over a thousand years ago.

In Pamir deposits have been discovered of salt, lignite, peat, sulphur, saltpetre, graphite.

The area of the Gorno-Badakhshan Autonomous Region is large—61,140 square kilometres—but valleys account for only a fortieth part of this area, all the rest are mountains. Severe natural conditions permit the development of only that part of this area in which it is possible to build roads and engage in economic construction.

That is possible primarily in the valleys and gorges of Western Pamir; Eastern Pamir is suitable for the development of livestock farming and of the mining industry. The whole of North-Western Pamir, difficult of access, enveloped by glaciers, and uninviting because of the severe climate—is still uninhabited. Here on those enormous heights live only a few brave and self-sacrificing workers at the meteorological stations and at the hydroglacial-meteorological station on the Fedchenko Glacier.

In Eastern Pamir there are several big high-mountain lakes.

The biggest of these is Kara Kul, situated in low desert shores at a height of 3,910 metres above sea level and covering an area of 900 sq. kilometres. The eastern part of the lake is bordered by ice, the remains of a huge glacier. The ice is invisible for it is beneath the soil. That lake is being studied by the staff of a hydro-meteorological station which functions there all the year round.

The most interesting of the big lakes in Pamir, however, is undoubtedly Lake Sarez situated at a height of 3,400 metres above sea level. It was formed in February 1911 as a result of a gigantic landslide, and at the present time it is 70 kilometres long.

Many other lakes in Tajikistan were formed as a result of landslides, but those occurred in times unknown. The biggest of those lakes are Zor Kul which lies at a height of over 4,000 metres above sea level and from which flows the river Pamir, and Yashil Kul, 40 metres deep,

from which flows the broad river Hunt. At one time there was a similar lake on the Vyaz-Dara, which flows into the Shah-Dara. Examples of such lakes in Kukhistan are Iskander Kul and the chain of Marguzor lakes. In 1952 a lake three kilometres long was formed as a result of an avalanche on the river Hingou, near the Tavil-Dara.

Characteristic of the geology of Pamir is the fact that the lakes Zor Kul, Yashil Kul and Sarez are strung out in a chain along the line of fractures which serves as the border-line between Eastern and Western Pamir. Those lakes were formed as a result of earthquakes which occurred from time to time, causing the landslides. The most ancient of these was the Zor Kul landslide, the next in time was the Yashil Kul landslide, and the most recent was the Sarez landslide.

3

It would be hard to find a fat, sluggish man among the highland Tajiks of Badakhshan. Trained in rock-climbing from childhood, surefooted, lean and physically well-developed, they become splendid mountaineers, bold hunters and excellent swimmers who fearlessly swim across the icy, turbulent mountain rivers.

Regular features, often handsome, staid, and light step are characteristic of the Badakhshan highlanders. Their national dress consists of, for men, white baggy trousers (sharovary), a white, grey or black cloth gown (glim) worn over a tunic, soft goatskin boots (pekhi), embroidered, coloured woollen stockings (juraby), and a skull-cap; sometimes they wear a chalma, or low turban. The women wear coloured cotton sharovary, a long cotton frock, and a white head-scarf hanging down the back. They wear rings, bracelets and necklaces. They plait their hair with woollen threads (kyulbits). Unlike the women in other parts of Central Asia the women of Badakhshan never covered their faces and, in general, enjoyed greater freedom. In the past all the work in and about house, including sewing, washing and cooking, was often done by the men.

The habitations of the Badakhshan highlanders were mere huts built of rough stones with a hole in the ceiling to let out the smoke from

the hearths. On the flat roofs they often stored their stocks of hay and clover, and in the summer they dried their mulberries and apricots. In the alpine meadows shepherds built rough stone huts, but higher up in the gorges, caves and fissures in the rocks served to shelter them from the rain, wind and snow.

Before the revolution, the Badakhshan highlanders never had enough grain or other provisions; for several months in the year the poorer section of the population starved, their only food consisting of "attalya," a soup made from grasses and peas, with the addition on rare occasions of a handful of flour. The majority had to be content with bread made from mulberry flour. Only the beys and the local aristocracy could afford to buy wheat, tea, coffee, haberdashery, scent, pottery and cloth from the Afghan and Indian merchants who came here with their caravans.

There were no bazaars or shops anywhere in Badakhshan. In Horog there were only shops kept by Afghan merchants.

Even before the arrival of Ionov's Russian detachment, the Badakhshan highlanders repeatedly appealed to Russia asking to be joined to her, and when Ionov arrived with his forces to Pamir, the local population rendered him vigorous assistance.

The following is an excerpt from the report written in 1893 by Captain Vannovsky who led a detachment of soldiers down the Bartang:

"The local inhabitants joyously welcomed the Russians, provided guides and porters, and rendered necessary services; and everywhere they begged to be accepted as Russian subjects."

The local khans cruelly oppressed the population. In Badakhshan there were castes: the highest caste was the Shana to which the local rulers, the khans, belonged. The next highest was the Seid caste. The Seids were "the servants of the living God," the Pirs and Caliphs, who were regarded as "God's shadow on earth." In every village there were also the representatives of the khan; they belonged to the Mir caste. The fourth caste consisted of the Akobyrs, from among whom the Khan's guard was recruited; and the fifth and lowest caste, the Ryots or Fokirs, consisted of all the tillers of the soil who laboured on their tiny, stony fields to provide all the higher castes with wheat, barley, millet, peas, mulberries and apricots, while remaining hungry themselves.

Yussuf-Ali-khan sold girls from the lowest caste in the bazaars of Kabul, Chitral and Peshawer. In the kishlaks Viyar and Dishor he sold to some Kirghiz who arrived there four Fokirs in exchange for four wolf-hounds. The delivery of children and young women in payment of taxes was a common practice in many places in Badakhshan.

There are women among the present-day social and Party workers in Soviet Tajikistan who in their childhood had been sold like commodities. Some of them managed to escape from the slave-dealers, but only the revolution released them all from slavery.

Opium smoking and diseases like trachoma, smallpox and itch were rife among the population.

After Western Pamir was placed under the rule of the Emir of Bukhara the population hated the beks and their officials. The small Russian garrisons in Pamir Post, Horog, Vakhan-Lyangar and Ishkashim hardly interfered in the life of the population. The country was ruled by the beks. The local rulers who were subordinated to the beks, like the beks themselves, imposed exactions upon the dehkans, ruthlessly exploited them, compelled them to turn the irrigation canals to their orchards and to till their land.

The lawlessness and violence perpetrated by the beks' officials knew no bounds. They forcibly took from the highland Tajiks their wives, young daughters and sons. There were cases when this lawlessness caused popular unrest. The local population appealed to the Russian military authorities for assistance. The military authorities made investigations and found that the unrest was a just "outburst of popular indignation against the Bukharan methods of administration."

Concerning a series of such incidents a Russian diplomatic official wrote:

"When I arrived in Horog a crowd of over two hundred people, the majority of them husbandmen from Shah-Dara and Hunt, came to me with a statement begging for annexation to Russia. They do not wish to have the Bukharans among them."

The inhabitants of Vakhan were so poor that the Russian military administration insisted that they be relieved for a time from the payment of taxes to the Bukhara bek.

Oppressed by the Bukhara authorities Western Pamir was poor, hungry, ignorant and so isolated from the outside world by the wild mountains that the majority of the population had no idea of what was going on outside of their gorges.

And yet the highland Tajiks of Badakhshan were a gifted, capable and highly moral people, able to dream of the beautiful and, within the limits of the small possibilities they enjoyed, to create cultural values.

The folklore of the Badakhshan highlanders is distinguished for its high artistry. Sitting in the shade of their mulberry-trees on the bank of a rippling, crystal-clear stream in a picturesque gorge, the Vakh, Shugnan and Rushan people composed songs full of emotional expression. Those were sad songs about their people lost in the mountains, songs about love, and about the formidable forces of nature. Touching the strings of his dutor (a primitive two-stringed instrument) the singer sang a series of couplets with a mournful refrain ("dargilmodik") or a refrain calling for attention. This form of Badakhshan verse was most widespread among the people. The laconic style of those songs, their vivid and expressive images, their fresh epithets, their tender emotion, anger or subtle humour, long ago attracted the attention of the ethnographists A. Bobrinsky, A. Semyonov, M. Andreyev, I. Zarubin and others who penetrated Pamir.

Many of the songs deplored the hard lot to which the people of Badakhshan had been reduced by the Afghan and Bukhara rulers. One such song recorded by I. Zarubin in Rushan ends as follows:

Men are now lower than cattle.
My soul is ready to fly.
Do not tie a stone to my body!
What is my name?—Davlat-bek.

A person sentenced to death was thrown into the Panj with a stone tied to his body.

Innumerable quaint fables, legends and traditions were passed on orally from generation to generation.

In the hands of skilful players the diverse musical instruments of the Badakhshan people—the hijak (a bow instrument), the dutor,

setor, rubob, panjar (pizzicato instruments), the nai (a wind instrument), the changi (cymbals), and the doir and nagor (percussion instruments)—give forth sounds of exceptional vividness and emotion.

Dancing, archery and "guibozi" (i. e., polo, which spread from Pamir to the whole of Europe) and other games were features of all local festivals.

Extremely fine wood carving, quaint ornament in knitted stockings and embroidery, and mural painting testify to the natural talent of the Pamir artists.

Diverse handicrafts supplied the Badakhshan people with clothing, foot-wear, leather, pottery, knives, sickles, horseshoes, paper made from mulberry-tree root, and other articles needed in the home and in the fields. There were, and are today, skilled smiths, potters, turners and dyers in all the gorges in Gorno-Badakhshan.

Before the October Revolution, however, there were no means of developing the gifts of the people of Western Pamir; amidst the hard struggle for existence and frightful oppression, the creative forces of the people were repressed.

The hard life of the Tajiks in Badakshan differed in no way from the life of the people in the neighbouring khanates—Afghanistan and North-West India.

The October Revolution put a sharp dividing line between the life of the Soviet Tajik highlanders of Badakhshan and the life of the peoples of the foreign countries adjacent to Pamir.

The first news of the February revolution was received in Horog on April 3, 1917, in a letter to the commander of the Pamir Detachment brought from Osh by courier. The Governor-General instructed the commander of the detachment to appoint a Commissar. A Commissar was appointed, but the Soviet of Soldiers' Deputies that was set up by the garrison refused to recognize him and informed the local population about the revolution. Next day a Volost Soviet Executive Committee was elected in Shugnan.

The Volost Executive Committee proclaimed the abolition of the rule of the Emir of Bukhara and ordered that the vacant lands of the Shah-

Dara beys be confiscated and transferred to the poor dehkans of Rushan and the Hunt Valley.

In September 1917 a new military detachment under the command of Colonel Fenin arrived in Horog. The local ishans and beys at once became his faithful servants. With their assistance an "Emergency Committee" and a "Rural Committee" were set up, but between them endless friction arose. Aziz-khon, the Volost ruler, in conjunction with the ishans made a treacherous attempt to establish contact with the Emirs of Bukhara and Afghanistan and to break Shugnan away from Russia. Their letters, however, were intercepted by dehkans; the enemies of the people were exposed as traitors, but with Fenin's assistance they managed to escape to India.

Supporting and heading the local clan leaders and the reactionary clergy, Colonel Fenin and his counter-revolutionary officers were the actual rulers of the region for a whole year.

In the autumn of 1918, fearing the Communists, Colonel Fenin and his officers fled to India, where the English intelligence service employed them for the purpose of preparing intervention. After the flight of the military detachment, however, power in Badakhshan passed to the people; the local activists managed to establish contact with Tashkent. In January 1919 a number of Communist political leaders arrived in Horog and organized the struggle of the poor section of the people against the local reactionaries. In November 1919 a Whiteguard detachment under the command of Lieutenant Colonel Timofeyev invaded Horog from the north and seized power in Pamir.

In March 1920 the Basmach bands of Madamin-bek, organized by the English in Ferghana, appeared at Post Pamir which was held by a Whiteguard detachment consisting of former Austrian and German prisoners of war and commanded by an ex-tsarist officer. Religious strife broke out between the Basmachi and the garrison in the course of which the latter was completely wiped out. On learning of this Timofeyev deemed it wise to follow Fenin and escape with his detachment to India.

On March 26, 1920, the inhabitants of Badakhshan celebrated their liberation and elected their representatives to the Soviet governing

bodies; but on March 30, an armed detachment of Bukharans, following the Panj track, appeared in Horog, captured the post and proclaimed Pamir a dominion of the Emir. Reprisals began.

The local Tajik youth, however, managed to organize, and on June 27, 1920, they captured Pamir Post, disarmed the Emir's forces and proclaimed Soviet rule in Pamir.

On July 14 the People's Assembly decided to send an armed delegation to the Soviet leaders to request the latter to send a military detachment to Pamir to guard the frontier against the encroachments of the British imperialists, Whiteguards and nationalist counter-revolutionary forces. The delegation consisting of young Badakhshanians succeeded in breaking through the Basmach front, and passing through Eastern Pamir and Alai it arrived in Tashkent and carried out its mission. In November 1920 the delegation returned to Horog together with a detachment. This detachment, however, had been hurriedly formed without due discrimination and was found to include undesirable elements. Consequently, in 1921 on the demand of the population it was replaced by a geniune Communist Red Army detachment. With the arrival of that detachment Soviet rule was finally and definitely established in Pamir.

In October 1924, when the new Soviet republics were being formed in Central Asia, Pamir became an Autonomous Region.

On April 26, 1925, the Revolutionary Committee of the Tajik A.S.S.R. resolved: "That Pamir inhabited by Kirghiz, and Gorno-Badakhshan inhabited by Tajiks, be considered as having passed to the territory of Tajikistan. . ."

At first it was named the Special Pamir Region, but soon after it was renamed the Gorno-Badakhshan Autonomous Region.

4

Everything had to be created from the very beginning. Not a single cart could travel over the toothed, knife-edge tracks in Western Pamir. The Kirghiz of Murgab treated toothache with red-hot nails and rubbed a mixture of ashes, dung and mutton fat into open wounds. The women

did not know the use of scissors, and many of the highlanders had never seen window glass. People with huge goitres wandered about in Vanch and Yazgulem. The people's minds were filled with horrible superstitions. Opium smoking drove people to insanity. In the winter the kishlaks were completely isolated from each other. Travellers slipped to their death from the narrow ledges that served as tracks overhanging bottomless chasms. Concerning these tracks the people said: "Wayfarer, beware; you are like a tear on an eyelash." They had a name for each one of those tracks, and they frowned, shook their heads and clicked their tongues significantly when mentioning them.

In 1922 the first Pamirians joined the Party and in the following spring, in Horog and in the kishlak Porshinev—the domain of the principal ishan Said Yussuf-Ali-sho—Young Communist League units were formed—the first two in Pamir. A year later in Porshinev, in the house in the shady garden of which the Bukhara bek had hanged four poor dehkans, the first Soviet school was opened for forty children. A second school was opened in Rushan.

The year 1925 was an eventful one for Badakhshan. After six weeks' journey the first Uzbek trading caravan arrived from Osh. It brought medical supplies, seed grain, agricultural implements, textiles and many other things. These commodities at once ousted those imported from Afghanistan. With the caravan came the first doctor with an assistant. A month after the arrival of the caravan the first hospital for the people was opened in Horog. Another seven elementary schools and two boarding schools were opened in the region. They were attended by three hundred boys and thirty girls, children of poor dehkans.

At the end of the year the First Pamir Congress of Soviets was held in Horog, and after it the people became aware, from the effect it had upon themselves, that the Soviet Government had launched a vigorous campaign against hunger, the miserable standard of living, opium smoking and disease. For the first time the area of cultivated land was enlarged; thousands of fruit-trees were planted.

Party organizers went to the most remote kishlaks and rallied the poor peasantry for the fight against their class enemies, organized

assistance of every kind for the population, and disbursed long-term loans to the needy to enable them to improve their husbandry.

One after another, crossing difficult passes, horse and camel caravans carrying food and manufactured goods wended their way to Eastern and futher on to Western Pamir. The cargoes carried grew immensely, the first caravan carried goods to the value of 60,000 rubles; the value of the second consignment was 400,000 rubles, and that of the third already amounted to 1,000,000 rubles. The first shops and co-operative stores were opened.

In 1928 the inhabitants of Horog and Rosht-Kala saw a cinema film for the first time; it was demonstrated by a travelling cinema. In the following year the inhabitants of Horog went out to welcome an aeroplane that had landed on the bank of the Panj.

The first five hundred half-boxes of graine distributed among the people of Badakhshan started the development of silkworm breeding in the region. The State Trading Agency began to buy furs and skins from the trappers. Seed loans granted to the dehkans enabled them to plant cereals even in the most remote gorges. Soviet scientific expeditions penetrated the most inaccessible corners of Pamir, conducted immense cultural work among the inhabitants, healed the sick and gave the people the first scientific information they had ever heard about their extraordinary country.

Horog, the administrative centre of the region, the kishlak with two thousand inhabitants situated on the rocky bank of the Hunt and surrounded by wheat, barley, millet and pea fields, and apricot, mulberry and apple orchards, grew into a small town. It had only one street that was really a street, lined with tall poplars and whitewashed houses. In the square outside the building of the Regional Executive Committee there was a statue of Lenin unveiled on July 6, 1927, and in front of it a small wooden platform. The rest of the town consisted of a labyrinth of narrow, crooked alleys with tiny stone-built houses in which cotton cloth was stretched across the ceilings to prevent the plaster from dribbling on to the heads of the inhabitants.

In 1931 the first regular detachment of Soviet Frontier Guards arrived in Western Pamir, and since then the green trimming of their

uniforms has been dear to the hearts of all the inhabitants of Badakhshan. The detachment brought with it a small diesel engine which soon chugged merrily behind the white walls of the ancient fort. Electric lights glimmered dimly in some of the houses in Horog. The detachment also brought new cinema films, new medical apparatus, and the equipment for a printing plant, the first to be set up in Horog.

On September 2, 1931, three weeks after the caravan arrived in Horog, the inhabitants read the first issue of the *Krasny Badakhshan* (*Red Badakhshan*), printed in two languages—Tajik and Russian—at the highest printing plant in the world.

With the same caravan came two automobiles, the first to appear in Pamir. They arrived in Murgab on June 14. Riding in front of a caravan of two thousand camels, they looked like the head of a gigantic serpent. They forded shallow mountain rivers, they had to be hauled out of deep hollows, they crept over narrow mountain tracks with the off-side wheels barely on the edge of the precipice, and held by numerous hands they glided almost end up from steep mountain slopes.

After crossing Kizyl-Art (4,444 metres above sea level) they reached Eastern Pamir, where in the high-mountain deserts the going was easier.

One of the cars was left in Murgab; the other went on further, and at the end of June the dehkans of Horog enthusiastically welcomed it with red flags.

Those cars were driven to Pamir by Stasevich and Goncharov, ordinary truck drivers working for the Andizhan Autotransport Agency.

In the kishlak Ishkashim a large Red Star lit by electric light shone from the top of a tall mast. In the clear mountain air it was seen by the inhabitants of India and Afghanistan thirty kilometres away.

Bread, tobacco, domestic utensils, soap, matches, agricultural implements and school books were now plentiful in the Pamir co-operative stores. The first tractor arrived in a dismantled state and was assembled here. There were already over a hundred schools in the region. A women's college was opened in Horog. The beating of drums of Young Pioneer squads began to be heard. Smuggling was stopped, and

so also was opium smoking. Scores of doctors and midwives performed their beneficial functions in newly-built hospitals and dispensaries in Ishkashim, Murgab, Kalai-Vamar, Bartang and Vanch. They restored sight to the blind who came from Afghanistan. Smallpox vanished; malaria declined; there were no new cases of leprosy. Veterinary surgeons and zootechnicians were working even in the most remote pastures. Everywhere new irrigation canals and firm bridges were built. The narrow mountain tracks were widened with the aid of dynamite and ammonal. Even the most remote mountain kishlaks were supplied with seed, fertilizers, agricultural implements and materials for exterminating pests.

In 1932 another six one-and-a-half ton trucks belonging to the Tajik complex expedition arrived in Pamir, and the first motor road through the Pamirs began to be laid. In the spring of 1934 hundreds of automobiles set out for Pamir, and the 740-kilometre journey from Osh to Horog now took three days instead of six weeks as it had been the case before. A regular passenger air service was started.

In the valleys and gorges of Gorno-Badakhshan the first collective farms were organized. In 1926 the area fit for cultivation was only a tiny fraction of the total area of the region, but thanks to the reclamation measures taken the cultivated area was now being constantly enlarged. The mining of minerals was organized and further developed. In the deserts of Eastern Pamir small road-side towns sprang up with bakeries, co-operative stores, medical centres, filling stations and hotels for passing travellers.

In 1933 the leather factory in Horog started operations, turning out leather, sheepskins and felt. A small silk-winding factory was also working.

In 1934 the building was started of the first big hydro-electric power plant in Pamir. By this time there were already over two hundred schools in the region attended by thousands of children.

That is how, vanquishing the wild mountains and age-long ignorance, surmounting thousands of barriers of different kinds, Soviet rule was strengthened and transformed life in Pamir during those first ten years!

5

The two-storey building of the Horog airport is surrounded by young trees. The Afghan frontier guards across the river watch the landing of the Soviet passenger planes. The port personnel live in neat, white cottages lit by electricity at night.

The city motor bus speeds along a wide road at the foot of a mountain, past the Stalin Collective Farm. A short way ahead a white town gleams from dense foliage. Near the farm buildings, which merge with the town, grain is being threshed by electricity. Yes, that is the way grain is threshed in Pamir!

The river Hunt rushes swirling on. In a field lying between the river and the mountain horsemen are dashing after a ball, bending over their light, Badakhshan ponies. They are playing polo, a popular game among the young people.

In Lake Komsomol, the first artificial lake in Pamir, swimming competitions are held. In the winter hockey is played on the ice at night, in brilliant electric light, and in the countryside mass skiing competitions are held.

In the new recreation park through the foliage of which Peak Dzerzhinsky is visible, football matches take place, often between a local farmers' team and that of the Frontier Guards.

The powerful Lenin Hydro-Electric Station provides sufficient electricity for the industrial enterprises, for the bakery and the public baths, for the dispensary for electric treatments, for public and domestic lighting, and for other domestic needs. Here electricity takes the place of fuel, which is hard to obtain. In the houses in town and at the collective farms there are electric stoves, electric flat-irons, radio sets and electric gramophones.

The city hums with activity. The Stakhanovites at the shoe factory are striving to retain their championship in socialist emulation with their competitors the Stakhanovites at the weaving mill. The Regional Co-operative Society is sending another caravan with goods to the remote kishlaks. Not far from the new offices of the Regional Party

Committee and Regional Executive Committee, the finest buildings in the town, dwelling-houses are being erected.

In September 1952 the Botanical Institute of the Academy of Sciences of Tajikistan held its regular session here, and papers were read by scientists from Moscow, Leningrad and Stalinabad.

At the Regional Theatre of Music and Drama they are rehearsing Schiller's "Perfidy and Love." The part of Louisa is played by charming Savsan Bandishayeva, People's Artiste of the Tajik S.S.R. After the rehearsal she entertains guests from the Socialism Collective Farm in Rushan, where she herself came from. They remember her acting in Rushan near the estuary of the Bartang, now the district administrative centre where not so long ago, in 1930, Khan Abdul-Giyaz lived his last days in the ancient fort of Kalai-Vamar smoking opium and with his tame falcon as his only friend. Savsan Bandishayeva was only a girl of nine at that time; but at the age of twenty she went to Moscow and took part in the Tajik Art Decade and performed at a concert before art experts of the capital. Today she will sing Russian and Tajik songs, and they will be broadcast to the remote kishlaks which now listen in not only to Horog but also to Moscow.

The girls in the Horog Children's Home recite the same poems of the Pamir poet Mirsaid Mirshakar which he himself recited in the Hall of Columns in Moscow during the Tajik Literature Decade in 1949. In this Soviet age a man grew up in Pamir capable of telling the whole world about his country in simple, but vivid verse.

...On the way home from school two girls discuss what they are going to be when they grow up. One says she will be a biologist, the other is determined to be an actress. They will have every opportunity to follow the careers they have chosen. Since 1948 seven hundred and ten middle-school graduates in Badakhshan have gone to big cities to receive a higher education.

Talk about friends who have gone to college in Stalinabad, Leninabad, Moscow, Leningrad and Samarkand is heard not only in Horog, but at all the collective farms and in all kishlaks in Pamir. And everybody wishes they would come back soon as geologists, botanists, doctors and zoologists. This is not 1923, when only thirty people in the

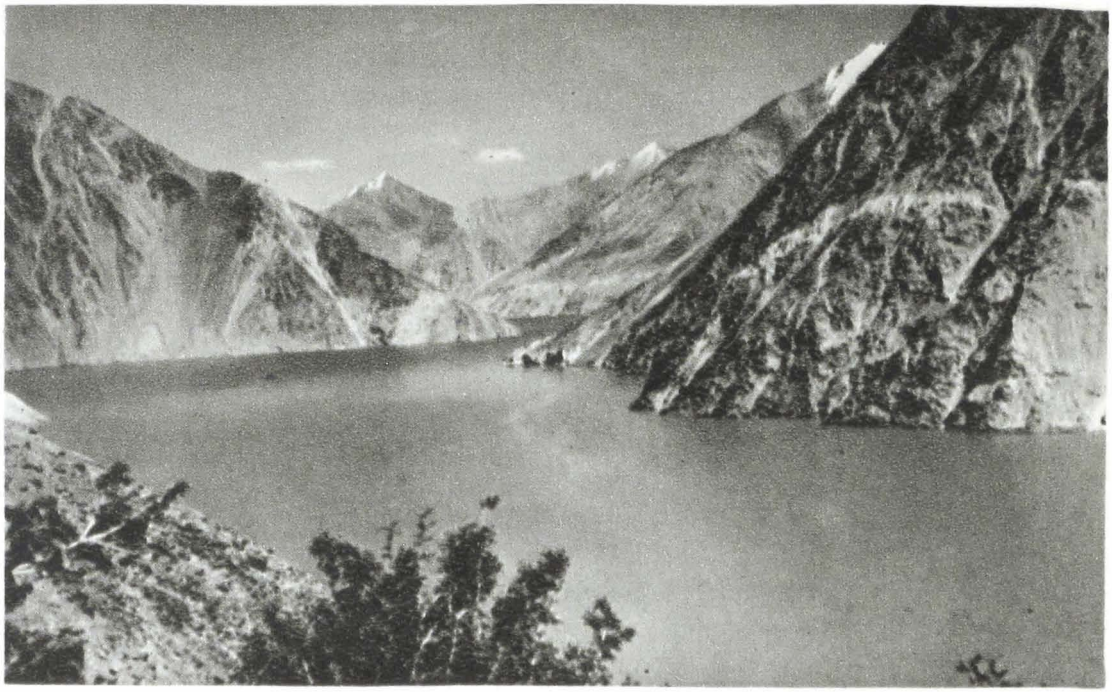
whole of Pamir could read and write. Today 96 per cent of the population is literate, and there are two hundred and forty schools attended by thirteen thousand children; over two hundred students attend the pedagogical school in Horog, and the young geographer from Horog, Kurbansho, and historian Iskandarov, are both in Moscow doing postgraduate research work at the Academy of Sciences of the U.S.S.R.

The main thing is—let them come back to their native kishlaks and gorges soon, for there is lots of work for them to do. Work is waiting for them at the Pamir Botanical Garden and Biological Station, at nineteen hospitals and polyclinics, at three malaria dispensaries, at several meteorological stations, at the offices of the two regional newspapers and of the district newspapers the *Rushani Surkh*, the *Hakikati Vanch*, the *Bairaki Surkh*, and others published in the Tajik, Russian and Kirghiz languages. Work is waiting for them at fifty kishlak tea- and reading-rooms and at a hundred and fifty collective-farm libraries, the shelves of which will contain books written by themselves. And at the fifty recreation clubs in Pamir they themselves, the young scientists from Ishkashim, Vakhan and Bartang, will deliver lectures.

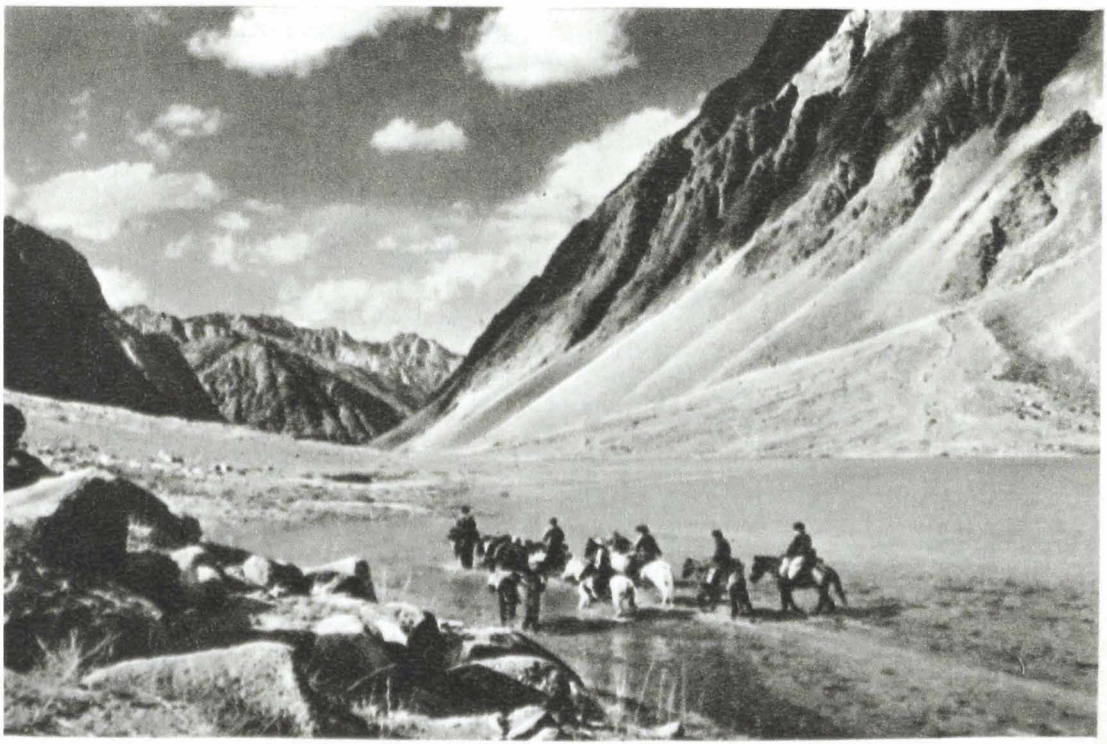
...At night the people in Horog go to their cinema theatre to see the latest films; and in the fifteen other cinemas scattered over the high mountains the latest films are shown.

In the garages in Horog the mechanics are preparing scores of motor trucks for their journeys. At dawn columns will set out in three directions: East, North and West. One column will go to the Roshtkal District; another will go to Rushan and further on to Stalinabad; the third will drive up the narrow gorge of the Hunt, past the International, Orjonikidze and many other collective farms to the heights of Eastern Pamir and still further, through gigantic passes to Osh in the fertile Ferghana Valley.

Only recently a kishlak with 2,000 inhabitants, Horog, the centre of Gorno-Badakhshan situated at height of 2,030 metres above sea level, lives a new and full life.



Lake Sarez, situated 3,200 metres above sea level in the Gorno-Badakhshan Autonomous Region



Pamir. A caravan on the way to Lake Sarez passing through the gorge of the river Lyangar

Pamir. The Horog Botanical Garden

Collective-farm amateur art. The Pamir Collective-Farm Choir and Orchestra

6

When work was begun to transform the Gorno-Badakhshan Region from a food-importing to a food-producing region, when the Bolsheviks decided to develop grain and livestock farming, a bold idea arose—to make fit for cultivation the barren land that lay beyond the agricultural line at heights ranging from 3,500 to 4,200 metres above sea level.

This work was begun in 1933 by the Pamir Expedition organized by the Central Asia State University in conjunction with the Plant Institute of the Soviet Union. The expedition was led by the celebrated biologists Professors P. Baranov and I. Raikova.

In 1934 a biological station was set up at the Pamir State Farm in Jaushangoz, in the upper reaches of Shah-Dara, 3,500 metres above sea level. Its experimental fields occupied five hectares. Six sub-stations were set up in different zones of Pamir.

Six kilometres from Horog, on a lofty terrace at the junction of the Hunt and Shah-Dara, a sub-station was set up which in 1940 was transformed into the Pamir Botanical Garden. Here in the experimental fields, ninety kinds of perennial fodder crops were planted.

In the kishlak Porshinev, at a height of over 2,000 metres above sea level, seven hundred specimens from the world crop collection were planted.

In the marches of Bash-Gumbez, in the Alichur Valley, at a height of 4,000 metres above sea level, a geo-botanical station was organized, equipped with thermostats, microscopes and a photo-laboratory, for the purpose of studying the high-mountain meadows.

On the shore of lake Yashil Kul, at a height of 3,600 metres above sea level, an ichthyological and hydro-biological station was set up.

At the biological station in Jaushangoz the search began for varieties of grain crops that would yield a crop under the severe high-mountain conditions. In the first year the wheat and rye grains failed to ripen. The barley perished from frost. In Horog the potatoes brought from other parts produced such a miserable tasteless crop that it seemed of no use bothering with this plant here.

On the other hand, buckwheat grew man-high and ripened quickly; maize came up splendidly too, and even fodder beets, turnips, radish and swedes produced big yields. In Horog, cucumbers grew well.

In the fresh water of Yashil Kul every cast of the net brought up about 50 kilograms of fish—different kinds of carp called osman and marinka—some of them weighing three or four kilograms each. This was proof enough that fish was plentiful in Pamir, enough to supply not only local requirements but also Ferghana.

The livestock experts ascertained that if meadow grasses were developed it would be possible considerably to increase the flocks and herds in Pamir.

As soon as the field work was finished the first Gorno-Badakhshan Regional Agricultural Exhibition was organized. This was a great event in the life of Pamir. Dehkans came from all the gorges to see the new crops.

This marked the beginning of enormous creative agricultural work.

Plant-breeding and agrotechnical work was continued in the following years. In Horog turnips reached a weight of two and a half kilograms, swedes and beets as much as three kilograms, Mongolian cabbages four kilograms, and Chinese radishes grew to a length of twenty centimetres. New varieties of potatoes began to produce splendid yields. The most astonishing thing is that in Eastern Pamir the crops strengthened by the operation of ultra-violet rays are not only capable of withstanding 15-16°C. of night frost, but also of retaining their leaves. Gymnospermous barley, beets and Chinese cabbage can withstand even 18°C. of frost.

It was found that in low temperature, plants in Pamir very intensively absorb carbon dioxide, and that micro-organisms which perish in dry soil under Pamir conditions are capable not only of living in the soil, but also of absorbing nitrogen under artificial irrigation.

No longer surprised by these wonders, the Pamir collective farmers actively set to work to cultivate these new crops everywhere.

The biological station was transferred to the Murgab District and in 1952 K. Stanyukovich was appointed director. Following the advice of the station staff, the Pamir collective farmers made excellent

progress, and today the Socialism, Karl Marx and Stalin Collective Farms, as well as many others, are able in July to send to market in Shugnan cucumbers, tomatoes, potatoes, radish and other early vegetables.

The talented agronomist Sukhobrus, who was killed in the Great Patriotic War, had lived in Pamir for several years before the war; he did enormous work in improving the local varieties of wheat and barley and shifted the agricultural limit to a higher altitude. In 1939 barley was sown for the first time even at a height of 4,200 metres above sea level—in the Murgab District a crop was harvested from a hundred and twenty hectares. In Badakhshan the "surkhak," "safedak," and in Ishkashim the "mamadali" and other varieties of wheat, improved and adapted to high-mountain conditions, are now being grown by collective farms which formerly grew only gymnospermous barley.

Already in 1947 in Pamir, where in the past the dehkans were glad to get a miserable yield of two or three centners per hectare, the average grain yield was fourteen centners per hectare, and in 1948 the advanced collective farms obtained yields that seem incredible in these parts. Thus the Kirov Collective Farm harvested an average of 28 centners per hectare; the Orjonikidze Collective Farm in Shugnan, in the Hunt Valley, 2,450 metres above sea level, harvested an average of 32 centners, and in 1949 an average of 34 centners per hectare.

Some collective farmers perform real miracles. Thus in 1948 Karim Gulberdiyev of the Kalinin Collective Farm in the Rosht-Kalin District, a veteran well over seventy, obtained from the section he was in charge of 39.2 centners per hectare, and in the following year he obtained 45 centners per hectare. Team leader Muromadov, of the Bolshevik Collective Farm in Bartang, obtained a yield of 42 centners per hectare; and a brigade led by Mirzoyev at the International Collective Farm harvested 38 centners per hectare.

Such achievements became possible because there are now seed-growing farms in Pamir; the farmers plant only tested seed, and many collective farms vernalize their seed before sowing. Another reason is that the Pamir grain-growers now possess numerous up-to-date farm

implements—ploughs, reapers and threshers—and they have learned to make thorough preparations for the spring field operations.

The return the Pamir farmers now get for their labour is such as their fathers and grandfathers could not even dream of. Thus in 1948 the family of Sabzali Chustaliyev, of the Kirov Collective Farm in Shugnan, received over five tons of grain, five tons of potatoes and 15,000 rubles in money. In 1949, on the twentieth anniversary of the republic, Sabzali himself was awarded the Order of Lenin for the excellent results he achieved.

In 1949 the family of Arabsho Asalshoyev of the Orjonikidze Collective Farm in Shugnan received five tons of grain, two tons of potatoes and 450 kilograms of meat, besides their share of the farm's money income. That is the income of the average collective-farm family. In 1950 the whole of the Shugnan District overfulfilled its plan for grain and cocoon deliveries. At their co-operative stores the Pamir collective farmers buy motorcycles, gramophones, sewing machines, radio sets and domestic electrical appliances.

There are still some collective farms in Pamir which are regarded as backward, but that is because for the time being it is difficult to reach them along the perilous mountain tracks on the edges of bottomless chasms, because the crags and rocks have not yet been vanquished, they have still to be removed, earth has to be put in their place, and the earth has to be irrigated. But ammonal is blasting roads to these farms too.

During the past eight years sixty new canals have been built of a total length of 250 kilometres. Over 1,300 hectares of formerly barren land now get water. The canals are hewn out of the rock. Horog is proud of its new main canal which in some places runs through semi-tunnels cut into the rock. The granite, gneiss and marble walls of narrow ravines are widened out to allow a freer flow for the mountain streams. And during the past twenty years the cultivated area in Pamir has been considerably enlarged.

In a beautiful gorge above Horog at a height of 2,320 metres above sea level there is the Pamir Botanical Garden. There is only one botanical garden in the world higher than it—the one in Darjeeling,

India. Making extensive use of the wild flora and the local varieties of fruit-trees—the result of the plant-breeding done by the highland Tajiks long, long ago—the staff of the Botanical Garden headed by the botanist A. Gursky is providing practical proof of the great possibilities of developing fruit-growing under the severe conditions prevailing in Pamir.

The staff have achieved the early ripening of Samarkand apricots and of imported varieties of apple, plum, peach and cherry. In this mountain climate these trees began to fruit two or three years after they were planted. In the garden, birdcherry blooms, raspberries, strawberries and other berries ripen, and the tobacco varieties "dyubek," "trapezund" and "samsun" grow excellently. Of twenty varieties of grapes never grown here before three have a yield of eleven kilograms per vine; these are grown by the young fruit-grower Shakar Shamirov. Thousands of seedlings of fruit and other trees raised by the scientific workers have already been transplanted in the collective farms and are thriving there. Thanks to the work of the Botanical Garden scores of new orchards have sprung up at numerous collective farms all over Badakhshan.

The Pamir Botanical Garden is also planting willow-trees on the pebbly river beaches. Seven-year-old willows have reached a height of seven to eight metres and a thickness of nineteen to twenty centimetres.

The Regional Afforestation Station is employing similar methods for the afforestation of the upper reaches of the Shah-Dara in Jaushangoz and in the upper reaches of the Hunt. Already tree planting is going on at scores of Pamir collective farms—in Shugnan, Rushan, Vanch and Ishkashim, where as yet the houses in the small kishlaks are surrounded only by fruit-trees.

Of great importance for the economy of Pamir is the breeding of yaks. Twelve kilometres off the Eastern Pamir Road on the shore of the light-blue high-mountain lake Bulun Kul there is a state yak farm. The fat, shaggy yaks grazing on the shore achieve a weight of five hundred to six hundred kilograms. The yellowish milk of the yak is rich in fat—as much as 10 per cent—and is delicious to the taste.

The livestock collective farms in Eastern Pamir raise yaks, horses and particularly the Kirghiz fat-tailed sheep, and they are constantly improving the breeds. The Murgab District has become the premier livestock district in the region. The number of commonly-owned livestock in the district averages eighty per collective-farm household, and the number of individually-owned livestock averages twenty per household.

During the past eight years the number of large cattle in Pamir increased 8-fold, and the number of sheep and goats increased 34-fold. By the end of the Fifth Five-Year Plan period the number will have increased over and over again. This is guaranteed by socialist emulation in which are engaged 154 collective livestock farms, 27 horse ranches, and 8 camel ranches.

Davlyatkadam Asanshoyev, a veteran shepherd at the Kaganovich Collective Farm in the Rosht-Kalin District, out of a flock of 500 fat-tailed sheep reared 130 lambs from every hundred ewes, the average living weight of the lambs being 37.5 kilograms. Kamchibek Khazhamkulov, senior shepherd at the Molotov Collective Farm in the Murgab District, out of a flock of 408 sheep reared 115 lambs from every hundred ewes, the average living weight of the lambs being 32.3 kilograms.

The daily catch of marinka and osman of the fishing brigades in Murgab, fishing in Yashil Kul, Zor Kul, Karadung, Bulun Kul and other lakes in Pamir, is thirty, forty and even fifty centners each.

Nobody has any doubt now that there is plenty of fish in the lakes; that there is adequate pasture and grass for hay; that severe frost and wind are now no hindrance to shepherds and herdsmen; that the new breeds of livestock will adapt themselves to the severe high-mountain conditions; that the new varieties of fodder crops: alfalfa, malitot, lentil and various northern grasses will cover many of the bare slopes of the Eastern Pamir Mountains. The new forms and methods of husbandry are successful everywhere in Pamir because the alliance between the scientists and the collective farmers is invincible, because the people of high-mountain Pamir, who with the people of the whole of the Soviet Union are marching towards communism,

want to work that way, are working that way, and know how to reach their goal!

In the description of Pamir given by the ancient Chinese traveller we read:

"Po-Mi-Lo (Pamir) stretches between two snowy mountain ranges and for this reason frightful cold reigns here and gusty winds blow. Snow falls summer and winter. The soil is impregnated with salt and is thickly covered with small stones. Neither bread grains nor fruit can grow here. Trees and other vegetation are rarely met with. A wilderness spreads all around with no sign of human habitation..."

That description now sounds like a fantastic legend.

The Pamir is called "the roof of the world." A more suitable name would be:

"The foot-hills of the sun!"


THE BORDER
BETWEEN
TWO WORLDS

1

IN A WIDE valley between gigantic snow-capped mountain chains two rivers join—the Pamir and the Vakhan Darya.

On the Soviet side there are two big kishlaks—Langar and Zung, and a number of small ones. Their houses stand in luxuriant orchards and their fields stretch along the valley and up the mountain sides. In these kishlaks there are schools, shops, dispensaries, post offices, cinemas, and electric light.

On the Afghan bank there are wretched, scattered houses of the old type; there are scarcely any trees, and not a human being is visible. The place is dreary and deserted in spite of the green patches of field. Through a silt pile runs a ravine choked with the moraine which comes down from the Hindu Kush. Beyond it loom the snow-capped mountains of India and Pakistan.

Those two rivers, one flowing from the high-mountain lake Zor Kul and the other from the glaciers of the Vahjir Pass in the Muzkol Range, form the head waters of the river Panj—the mighty Amu Darya, which flows 2,336 kilometres to the Aral Sea.

No matter how far one travels from here along the Panj through mountainous Ishkashim, Horog, Rushan, Kalai-Humb and further across the plain through Chubek, Kirovabad and Termez, everywhere along the right bank of the river will be seen the striped posts marking the frontier of the mighty Soviet State. This broad, winding, swirling river of Asia washes the southern borders of three regions—Badakhshan, Garm

and Kulyab—and several southern districts of Tajikistan, and further on it washes the borders of Uzbekistan and Turkmenia up to Kelif. Everywhere will be seen the white buildings of the Soviet frontier posts and the green shoulder-straps and caps of our gallant frontier guards safeguarding the peaceful labour of the people of our country.

The frontier guards are the best friends of the Tajik collective farmers; the friendship between them is unselfish, it is deep and indissoluble. Hence, the entire Soviet state frontier along the Panj is protected not only by frontier posts, but also by the great devotion of the Tajik people to their motherland, the U.S.S.R.

And any foreigner standing on the left bank of the river can see with the naked eye a different life, pleasing or displeasing to him—the life of the Soviet people which fills the hearts of the oppressed working people with hope, and rouses the fierce hatred of the feudal landlords and of the capitalists and spies of all the imperialist countries.

The foreigners see on the Soviet side the collective-farm fields of Ishkashim, Shugnan and Rushan; they see passenger aeroplanes landing every day at Horog; they see Pobeda cars speeding along roads on dizzy heights overlooking the Panj; they see the cotton fields in the former desert around Kirovabad with cotton plants man-high; they see trains and ships at the wharf of Nizhni Panj; and at night they see electric lights everywhere.

It is difficult for Tajik dehkans to conceive that a life of gloom and poverty exists at no great distance away from the frontiers of the U.S.S.R.; but it exists everywhere on the other side of the Panj, right up to the Indian Ocean, to the shores of the Mediterranean Sea, and further.

In 1949 the Tajik poet Tursun-Zade together with a group of Russian poets visited Pakistan beyond the Hindu Kush. In his description of that journey he wrote:

"We visited villages and talked with the peasants, with many of them in my own Tajik language. They were all illiterate. They were ignorant of newspapers and books.

"They fed on edible grasses.

"The loin cloths around their lean bodies were mere rags. They did not know the feeling of having had a good meal. They told us about the incessant strife that reigns among them, provoked by the English.... They listened with bated breath, as if to tales of wonder, to every word told them by the Soviet poet about the rights enjoyed by the people of Soviet Tajikistan, about their collective farms, about their new way of life."

In Peshawer and in the working-class districts of Lahore Tursun-Zade saw inscriptions on the walls:

"Follow the example of revolutionary China."

The frontier between Tajikistan and China stretches four hundred and thirty kilometres. Beyond Lake Zor Kul it rises abruptly to the ridge of the lofty Sarykol Range. It runs far to the north. East of it towers the Kashgar Range, with the summit of the gigantic Mustagat ("Father of the Ice Mountains") rising 7,434 metres above sea level. Beyond stretches the great geological depression, the desert lowlands of Taklamakan which drop below sea level.

The whole of this territory of Eastern, or Chinese, Turkestan, inhabited mainly by Uighurs, Dungans, Kazakhs, Uzbeks, Kirghiz and Tajiks, belongs to China and constitutes its extreme western province—Singkiang. Until recently this province with the complicity of the corrupt Kuomintang rulers was the arena of the aggressive activities of the Anglo-American imperialists and, as a consequence, the eastern frontier of the U.S.S.R., from Pamir to Kazakhstan, was the object of constant provocative actions on the part of bands organized by the imperialists.

Today the eastern frontier of Pamir is the quietest frontier of Soviet Land; peace and eternal friendship bind the Chinese and Soviet peoples living on each side of the gigantic Sarykol Range. Caravans carrying merchandise travel peacefully along the tracks laid over mountain crags and glaciers from the Soviet Union to China, and from China to the Soviet Union. The wildest mountain summits become more inviting and accessible; the hissing of bullets is no longer heard, blood has ceased to flow, the rarefied mountain air no longer echoes with bugle calls sounding the alarm.

The road for peaceful people is open from Peking through Pamir Murgab to Moscow, and from Moscow through Badakhshan and Alai to Peking—the great ancient trade route, for the possession of which wars were fought for thousands of years.

Confident of the might of their Soviet State the people of Soviet Tajikistan are going on with their peaceful and fruitful work. Like all the people of the Great Soviet Union they love peace, cherish peace, guard it and fight for it, knowing that in this fight for peace they have hundreds of millions of friends.