

HUNZA

Lost Kingdom of the Himalayas

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BY
JOHN CLARK



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HUNZA: LOST KINGDOM OF THE HIMALAYAS
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TO
ALL OF THE AMERICANS, PUNJABI, BRITISH,
HUNZAS, SWISS, KHIRGIZ, DANES, CHINESE,
AUSTRALIANS, PATHANS, DARDS, KASHMIRI,
WAKHI, UIGUR, UZBEK, TADZHIK, BALTI,
QUOR, BERICHO, AND OTHERS WHO PARTICI-
PATED IN THIS VENTURE, THIS BOOK IS RE-
SPECTFULLY DEDICATED.

P R E F A C E

THIS book tells the story of an experiment in living, with Hunza for a laboratory, a six-hundred-year-old castle as a test tube, and the people of Hunza and myself functioning as reagents. What happens when a pre-Bronze Age people, who have never learned to fashion metals or pottery, meet a Western scientist on their home ground? Is mutual understanding possible? How do an intelligent people, isolated for two thousand years, think? What is their response to meeting a man with an entirely different attitude toward life? Are they capable of recognizing the value of an alien philosophy and learning it, or can they only memorize techniques? And what happens to a Westerner who tries to step back in time and live day by day in the manner of his primitive neighbors?

The experiment ran for twenty months. As the Hunza people taught me to eat their food when it was plentiful and to be hungry with them during the spring famine, to share their celebrations and to appreciate their grimly beautiful mountains, I slowly reached an understanding of their way of life. Gradually, as I taught them the improvements and new ideas I was trying to introduce, they decided what they would accept and what they would not.

Necessarily, the return to ancient ways had a profound effect upon me. I learned by experience the weight a primitive culture exerts upon one's spirit, the things, for example, that hunger and beri-beri can do to one's sense of humor. I have tried to explain this as briefly as is consistent with the reader's understanding of the story, avoiding hypochondria and maudlin introspection.

Most of all, this is the story of a group of young men who were eager to progress, and the way in which a few Western ideas freed them to do so. They demonstrated that nowhere on earth could one find more earnest, intelligent students.

Writing this book has presented difficulties. A background of twenty-five years in research science develops an attitude of detached objectivity guaranteed to make editors cry aloud. My first manuscript was a point-by-point report on Hunza, infused with all the fire of the United States Geological Survey Water Supply Papers. When one has

enjoyed the crystalline purity of measurements, there is something uncomfortably muddy about an adjective. Why, for instance, must I say "a tiny stone hut," when I could write "a building 15' by 10', and 5' high, made of unmortared gneissic boulders averaging 20" diameter"? It has been necessary to shift my basic attitudes completely, to see things through the eyes of my reader and describe scenes as they would appear to him rather than in the atmosphere of unadorned fact which is natural to me.

I had difficulty understanding some attitudes of my Hunza friends, even while living among them. They will certainly be more difficult for an American comfortably settled in an armchair at home to comprehend. If the reader feels some confusion, alternately sympathetic and impatient, I will have fairly presented them, for his reaction will then be the same as mine was.

Space did not permit the inclusion of many really pertinent stories in this book. I tried at first to achieve a fair representation, telling of medical work, teaching, prospecting trips, and political complications about in the ratio in which they actually occurred. Unfortunately, alterations of proportion soon became unavoidable, in order to maintain the narrative. It was possible to include less than one-third of the prospecting trips, and the few medical cases described in these pages must represent more than five thousand. I have deleted as many as possible of the incidents involving people who were opposed to me or to my program; the few that have been retained are necessary to an understanding of the story.

A minor but disturbing alteration has been necessary in the dialogue. I am cursed with a vivid memory, which makes it possible for me to remember most conversations word for word, once the circumstance is recalled. The dialogues given are the nearest possible approximations to what we said, but two types of change have been inevitable. First, naturally, are the differences between Urdu and English syntax; I have put cultured Urdu into good English. The second change is a compromise. My craft-school boys and I spoke highly colloquial Urdu; we used Brushuski common words, frequently counted in Uzbek, and swore, I regret to admit, in English. Translating this hodge-podge into American slang would have created the proper grammatical impression, but the feeling of being in Asia would have been hopelessly shattered. I have, therefore, translated their conversation into proper English.

This book would never have reached completion but for the guidance of my editorial consultant, Barbara Rex. How she maintained her patience through my interminable rewritings, I do not know; she must

have been sorely tempted to tell me to hire a ghost, on many occasions.

I wish to apologize to the numerous people who could not be mentioned for lack of space, although their paths crossed mine in the course of the venture. Not only has this story been cut to the bone, even the smaller bones have been whittled away. My appreciation of the encouragement of my unmentioned friends is no less sincere because I have been forced to omit them from the book.

I wish also to express my regrets to those travelers whose impressions have been contradicted by my experience. On my first trip through Hunza, I acquired almost all the misconceptions they did: The Healthy Hunzas, the Democratic Court, The Land Where There Are No Poor, and the rest—and only long-continued living in Hunza revealed the actual situations. I take no pleasure in either debunking or confirming a statement, but it has been necessary clearly to state the truth as I experienced it. I have left undiscussed several other myths about that happy land, because they were not germane to the story.

Old Asia hands will, I trust, realize that I am not so naive and gullible as certain passages imply. One cannot interpret Asian politicians' motives in print, no matter how accurate the interpretation may be, nor can one publish true but defamatory material in order to clarify one's story. I have no desire to do either; if this story is worth telling, it is a much larger thing than any personality difficulties which may have arisen. I do not expect that this book will cause America to adopt the necessary policies as I see them. However, they are the fruit of my own experience and observations, and I would be doing less than my duty if I failed to present them. It is my hope that the reader will like my Hunza friends, understand those who oppose me, and learn with me from my failures and successes.

Finally, I wish to thank the Pakistan Government, and particularly the Foreign Minister, the Honorable Mohammed Zafrullah Khan, the Secretary General, Mr. Mohammed Ali, Mr. Ikramullah of the Foreign Ministry, and Mr. Mueen-ud-Din of the Ministry for Kashmir Affairs, for the numerous courtesies and fine cooperation which they extended to me.

Princeton, New Jersey
10 January, 1956

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HUNZA

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CHAPTER I

An Interrupted Journey

THE Pan American Clipper thundered down the runway and into the air with leisurely purpose. Pursuit ships might screech away frantically, and pleasure craft hop about like sparrows, but we were a scheduled flight around the world, a matter which men and airplanes take seriously. We climbed into the bright sunshine of a New York April morning and turned northeast.

Although we were spanning the earth by the most progressive methods, I knew that in reality I was headed back in time. This plane would take me half the world away to Karachi in Pakistan; then I would go north by train to Peshawar; then by plane further north to Gilgit; then on horseback three days to Hunza, a small country high in the Central Asian peaks and back five thousand years to the days before men knew how to make wheels.

I am a middle-aged geologist, a specialist on deserts and fossil bones, a bachelor. It seemed incredible that I was leaving my research work and my comfortable way of life in order to live as my primitive ancestors had, in an almost inaccessible corner of Asia. My object was to attempt to show the members of one Asian community how they could use the resources they already possessed to better their own lives. More important, I would endeavor to teach the people of Hunza that within their own efforts lay their hope of the future, that they could (with a little guidance at first) lift themselves as high as they wished, and that they did not need Communism in order to do so. I knew, of course, that one man could not stop Communism in Asia, but I also knew that one properly managed project like mine could free several thousand Asians from its menace, and could act as a sort of pilot model for larger efforts. The delightful part of this whole project was that I had learned most of the techniques from the Russians themselves.

As I thought of my plans—setting up a craft school, distributing vegetable seeds, starting a medical dispensary, and the geologic survey I intended to make—I back-tracked six years to the summer of 1944 when this idea was first born in my mind. At that time I was reconnaissance en-

gineer on General Stillwell's staff. It was my job alone to survey nine thousand miles of trails and roads in Kansu and Sinkiang Provinces, the longest ground reconnaissance in United States military history. I remembered one particularly beautiful blue and gold morning. The breeze-rippled bunch grass of the Urumchi plain shimmered north to the Sungarian basin of Chinese Turkestan; to our left the mud huts and tan plowed fields of the Chinese refugee colony stabbed into the grassy plain.

"Look at these broad fertile acres!" said the Reverend Mr. Jones, with an oratorical flourish, as he stood there beside me. "With American financial help, Chiang Kai-shek can resettle all the refugees of war and flood here in Sinkiang." He was a missionary official who had been sent to Urumchi as "short-term expert" on Chinese refugee settlement.

I ignored the oratory and examined the ground nearby. The grass was salt grass, and a scattering of alkali whitened every hummock. This land would raise no crops for anyone. Then I looked still closer and could see the weathered droppings of the sheep which had grazed here last winter. To judge from the number of droppings, this must have been an important winter pasture.

I told the missionary that, before I recommended American aid for the project, I must ask the local people if destruction of their winter pastures would mean that their flocks must starve. Then I must also ask the Chinese refugee farmers in the small colony how their crops were doing.

"Lieutenant," Mr. Jones said sternly, "are you anti-Kuomintang? Are you opposed to the welfare of these poor Chinese? Does your service as a military officer leave you no room for mercy?"

Later that day I walked over to the Chinese colony alone. A thin, blue-trousered Honanese was working in the nearest field and I questioned him.

"It is true, Honorable Sir," he said, "that a little of the land back there close to the mountains produces good vegetables. But this soil out here in the plain raises nothing! My family and I did not want to come here to this bitter, desert land. Chiang Kai-shek's soldiers loaded us on trucks and forced us!"

I returned to Urumchi at once, and went to see some Turki shopkeepers who were old residents. "Oh, Effendi," one of them said, "there will be war when the Hazakh people bring their flocks down from the mountains this fall. They must have winter pasture or starve, and these Chinese have plowed up all their pasture."

That evening I had dinner with a Chinese official. "Yes," he boasted,

after many glasses of wine, "now that we Chinese are in command we shall Sinify this province." (Sinify is a Chinese term for genocide of a local people and replacement with Chinese.) "We have destroyed the Hazakhs' pasture; in a few years they will starve. What matter if they kill some transplanted Chinese peasants in the process—can we be held responsible? Then we shall force the Uigur Turki off their farms, and in forty years Sinkiang will be all Chinese, just as our fathers made Inner Mongolia Chinese sixty years ago!"

When I told this to the missionary, that sincere, foolish man called me unchristian. I reported it to my Chungking military headquarters and was called anti-Chinese. That autumn the Hazakhs came down from the mountains and fought for their pastures. This diverted eleven Chinese divisions from fighting the Japanese and almost embroiled all Central Asia in war. The United States donated three thousand truck tires for the Kuomintang wheels, which helped starve the Hazakh herders and lent assistance to the genocide. The people of Central Asia, including the Chinese refugees who were helpless pawns in the game, did not love America for this. Five years later the whole area went Communist without a struggle.

I had learned my first bitter lesson about befriending Asia: If you want to make friends with any people, you cannot do it by working through their government or their political parties.

Meanwhile, Asia taught me a second lesson. The Russians had used the local Turki revolution of 1936 as an excuse to help a brutal Chinese general, Sheng Shih-tsai, set up a dictatorship in Sinkiang. Using him as a puppet, they had held undisputed rule over the area for almost eight years. A month before I arrived, for some unexplained reason the Russians withdrew their forces, leaving their whole administrative system intact for me to study as I traveled. A more effective, coolly calculated program, tailor-made for Asia, I had never seen.

Schools had been built in every town; thirty-four of the thirty-six in Sinkiang had been started by the Russians, teaching ten hours weekly of Russian political thought and twenty-five hours of sound basic education. Boys from families too poor to support them received free room and board at school. Classes were given in the local languages, no matter how many teachers were required. The curriculum in Chuguchak high school, for instance, was taught in five languages by five sets of teachers. These were good schools, with no more propaganda than existed in the Chinese Kuomintang schools.

The Russians had built simple, cheap gravel roads; not paved high-

ways with concrete bridges, but quickly laid all-weather roads with wooden ten-ton bridges which would carry local traffic.

They had brought in a quantity of little twenty-five and thirty horsepower portable steam engines. One ran a small electric-light plant, another a portable flour mill. Elsewhere, still another furnished power for a small portable sawmill. Each village paid the cost of the operation, usually less than one quarter as expensive as the same job done by the old hand methods. There were no multimillion-dollar projects and no effort was made to work through Chinese political parties. No one became wealthy, but every last farmer and villager was just a little better off economically than he had been before.

I also found the horrible side of Russian colonization. Following disturbances in the beautiful city of Ili, six blocks had been set apart. In this section, the Russians had killed every man and boy, as an example, they said, to the rest of the city. They had so terrified people that later, in the small villages, children ran away as soon as they saw my uniform and helmet, because they thought I was a Russian. The Communists had killed more than fifty thousand Greek Orthodox people, and at least thirty thousand Mohammedan leaders, out of a total population of about four million. They never bothered to justify their murders. Planned killing was simply part of the program, and the local people were expected to accept it, along with the schools, roads, and the little steam engines which chugged so usefully in their towns.

"The Chinese," said one Turki in Kashgar, "oppress us, kill our leaders, propagandize our children, and sell us no goods. The Russians oppress us, kill our leaders, propagandize our children, and do business with us. What does America expect of us, Effendi?"

It was not enough to tell these people about the evils of communism. We would have to surpass its best achievements, and do it in ways they could utilize and understand.

The constructive part of the Russian program was effective and practical, due to four sound principles of operation. First, they dealt directly with the people they wished to win, never through their political parties or governments. Second, they started small-scale industries in every district, so that everyone became a little better off, and without causing any major economic upheavals. Third, they gave the people free medical help and education. (All other efforts must be self-supporting.) Fourth, they gave sound, practical education to the mass of grade- and high-school children before trying to produce university-trained specialists. The aim was to raise everyone's living standards a little, and to

enable every boy and girl better to support himself. It was not their intention to solve the basic problems of Asia, to develop individual geniuses, or to build monumental public works.

If we Americans could operate a program based on these principles, without the secret police or the atrocities and intrigues which necessarily accompany the Russian system, we would not only win the friendship of non-communist Asian people, but we might drive Communism out of existence. This would be the democratic way of doing things and the neutral Asian governments could not logically object to it.

My plan sounded like Point Four, but it was basically different. It required many people and a small amount of money, whereas Point Four exports a few people and billions of dollars. All operations were to be carried out by Americans working directly with local people; not one cent was to go to any Asian government. Only medicine and education were to be free. We would help people to become self-supporting without robbing them of their self-respect through handouts. We would start small-scale projects, and make the average person a little better off without giving anyone a chance to amass an unearned fortune.

After the war, I returned to America and tried to interest the Senate Committee on Foreign Relations in this proposition. Three months later I received a form letter thanking me for my suggestions, which was obviously a polite rejection. Next I tried the State Department, and learned that the Department consults civilians only on its own initiative and is not receptive to gratuitous advice. Then I went to three missionary boards. Several of their high officials thoroughly approved, but their funds and personnel were all docketed for specific purposes. The Methodist Board agreed to help if I could find the money.

That put the matter right up to me. I would either support my belief with my own efforts, or abandon the entire project. I felt the need for haste. I could not forget the words of the Russian consul-general of Kashgar, "Russian foreign policy is perfectly simple. Tomorrow we take Asia, and the next day we have you!" Already China was crumbling; there was revolution in Azerbaijan, and India was, to my certain knowledge, riddled with Communists.

If I could run a successful pilot project and if it drew any kind of publicity, it would help convince America that Asia could be won. Four of my long-suffering friends agreed to act as officers, and we incorporated ourselves as the Central Asiatic Research Foundation. The purposes of the Foundation were to explore all aspects of the geography of Central Asia in order to learn what resources were available; to help

Asian people to use their own resources to their own best advantage; to institute medical and educational assistance; and to promote understanding of Asia here in the United States.

By the spring of 1948, the Foundation had raised \$7,000. This was enough to pay for a scouting trip of a year or more, if I went alone. I decided to go up through Pakistan, through the Karakoram cordillera, across Mintaka Pass into China, and on to Kashgar. This was shorter than going in from the east, all the way across from the China coast, even if there were a chance that the Chinese Government would permit me to cross revolution-torn northern China, which was highly improbable.

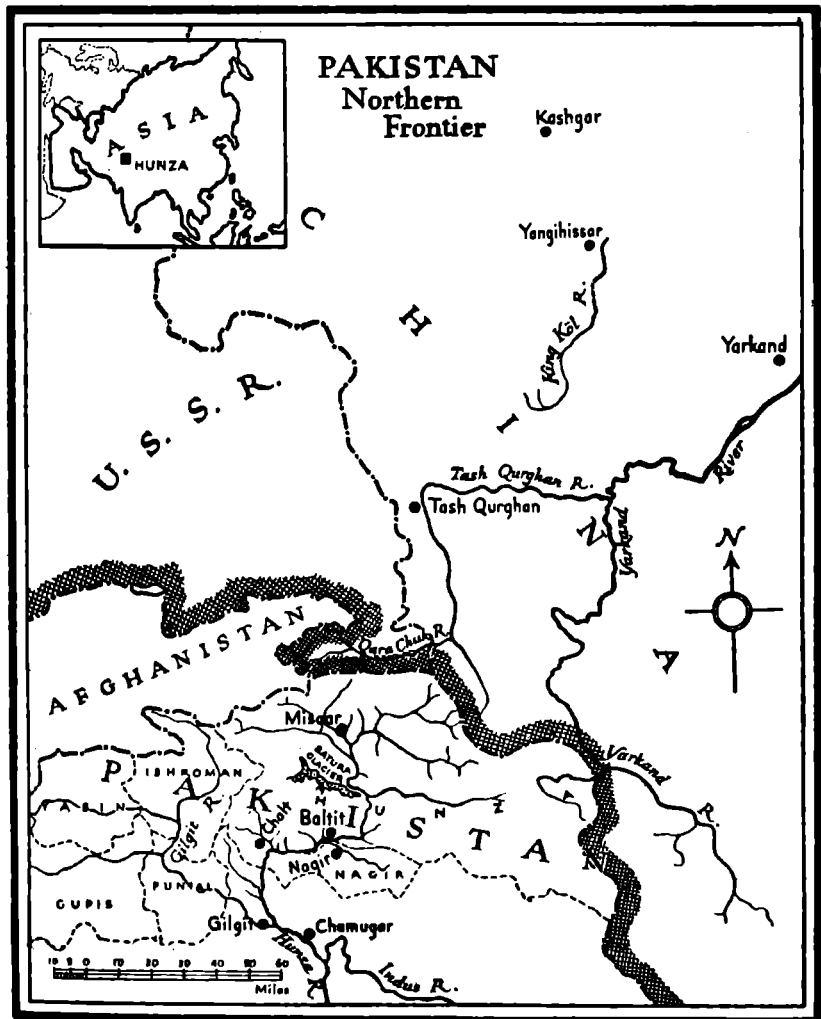
The first trip was entirely a scouting job. I must find, first of all, tribes of people who had basically good intellects and strong bodies, but who lacked natural resources. Our pilot project would need good human material to make it a success, and the poorer the country we worked in, the more valuable and dramatic our work would be. I must also learn where the governments concerned would let us work. China, Pakistan, and Afghanistan were all possibilities.

In Karachi, I hired Haibatullah Hojeh, an Uzbek refugee from Russian Turkestan, to act as my interpreter, and off we went. The railroad took us to Peshawar; then we traveled by bus to Mardan, and by a rented truck to Dir. From Dir we traveled through the land of the happy-go-lucky Quor people to Gupis, and there passed into the country of the slender, lazy Dards. At Gilgit we turned north for the tremendous trail over the cordillera to Kashgar. We left the Dards at Chalt, and entered Hunza, the country of the Kanjut, who called themselves Hunzakutz. Even on that first trip we were impressed by Hunza, but we still wanted to reach Turkestan. We continued northward through precipitous gorges, through the black slate mountains of the Wakhis, over the pass at Mintaka, and into Chinese Turkestan. We visited with Khirgiz nomads, avoided the degenerate Tadzhiks, and finally reached the fertile oasis of Kashgar, the cultural center of the Uigur Turki. These and the Khirgiz were the people of my choice. However, we found that the Chinese Government was still following its suicidal policy of oppression and murder. Naturally, the local officials did not welcome foreigners, so Haibatullah and I climbed back over Mintaka Pass into Pakistan.

The Pakistan Government gladly gave us permission to work, and Haibatullah and I decided to make our headquarters in Gilgit. I spent the next eight months exploring this northern mountain country. I visited Yaghistanis, Baltis, Kashmiris, Dards, Quor, Berichos, and Beltum. Of

them all, the Hunzas were plainly the most hopeful people. They were upstanding, intelligent, clean, and pitifully anxious to work. They were also desperately crowded and impoverished, and the mountains they inhabited were bleak enough to make any change an improvement. I moved from Gilgit to Hunza, and spent my last two months becoming acquainted with these people and their country.

Although the entire country was only a little larger than New Jersey, it was so rugged that crossing from north to south was a week's trip on horseback. The Pakistan Government administered Hunza's for-



eign relations and defense, and the Mir ran local affairs. With Afghanistan and Chinese Turkestan on its northern border and Russia only fourteen miles away, Hunza would have been a highly strategic area if it had not been so mountainous as to make travel almost impossible. Actually, with only one horse trail running from north to south and a trail from east to west which not even a horse could follow, the twenty-five thousand Hunza people were living in a world almost of their own. Many of them had never heard of the United States, and a few did not know that there had been a Second World War.

The Mir of Hunza welcomed me to his country, and agreed to let me use his old castle as headquarters. He was an extremely pleasant, intelligent man who spoke perfect English. He kept in touch with the Pakistan officials at Gilgit through the telephone line which the British had strung from Gilgit north through Hunza to the Chinese frontier. Looping through these primitive villages, that telephone line was a complete anachronism.

In the summer of 1949, I returned to the United States with my money spent, but certain of the location for our project. I taught Geomorphology at the University of Michigan for one semester, in order to earn a living while I recovered my health (after a year in Central Asia one's body needs an overhaul). It was also necessary to raise more money. Then for two months I planned my trip and bought equipment.

With \$21,000 this time, I would have to go alone again. I must buy tools for a woodcarving school, clothes for myself and my students, medicine for a general dispensary, butterfly nets, saddles, hypodermic syringes, a two years' supply of toilet paper—altogether more than three thousand different items. Then these must be packed in Army footlockers, eighty pounds in each, so that two lockers would make a balanced load for one pack-horse. It would cost forty-two cents per pound to take luggage from New York to my headquarters at Baltit, Hunza. I carried no luxuries at all, but still I had a ton and a quarter of equipment.

At last everything was planned, bought, packed and shipped. And now on April 25th, 1950, I was going back to the highest, driest cordillera on earth.

There is something about flying in clouds that creates an affection for the wing outside the plane window. It's a companion, always there beside you, rather like a horse on a long day's ride. We headed east over the ocean. Just offshore the bright day changed to the usual Atlantic clouds. As I settled down for the long flight ahead of me, watching the

gray swirling mist envelop the plane, I thought that at last I was on my way.

We had left New York on Tuesday morning; we landed at Karachi on Thursday, in mid-afternoon. The customs officers were courteous and efficient; I was through all the inspections and registered at the airport hotel within half an hour.

I changed to cool clothing, stepped from the hotel into the muggy heat of the Sind Desert, and took a taxi into the city. The driver assured me that the standard price was fifteen rupees. (At that time, one rupee equalled about thirty cents.) Without argument I turned toward another cab. At once he dropped the price to twelve, so off we went. The real price was probably ten. Like most Americans, I hate to bargain, but now I was back in the East where it is a way of life.

My plan was first to contact Haibatullah Hojeh, who had acted as interpreter on my original scouting trip. I must then arrange appointments with several Pakistan Government officials.

Because Hunza was a native state, not a part of a regular Pakistan province, entering it was not as simple a matter as going to Lahore or Peshawar for a visit. All the native states on the northern frontier were grouped under one administration, called an agency, with headquarters at Gilgit. In order to enter the Gilgit Agency, it was necessary to obtain permission from the Pakistan Ministry Of States And Frontier Regions, which would first ask the approval of the Pakistan Political Agent—their Gilgit field chief—and of the Mir of Hunza. I had decided to approach the Pakistan Foreign Ministry, where I was already well-acquainted. I expected everything to go smoothly; I had left nine months ago on the best of terms with everyone and with verbal approval of my new project. However, like most field men I have a deep distrust of those who sit in offices and make or break projects with their fountain pens, so I felt just a little nervous as I rode toward the city.

The road to Karachi passes over several miles of undulating sandy plain punctuated by an occasional Sindi hut. Most of the refugee camps from the partition massacres had been cleaned out and the refugees settled, but a few squalid colonies remained along the way. The line between desert and city is sharp. We entered Elphinstone Street, with its strangely European facades and its swarms of Asian people, then turned into Bunder Road, and from there to the Foreign Ministry, where I left a note requesting an appointment. We returned through Jinnah Bazaar, a mad tangle of pushcarts, peddlers, camel carts, bicycles, small children,

and struggling humans. We turned down a quiet side street, and ground to a stop outside the headquarters of the Turki Muharjarin (Refugee) Society. I could not be certain whether Haibatullah would be there waiting, because I was already three weeks behind schedule.

As I stepped from the taxi, I caught sight of him sitting by the black slot of the doorway; a little leaner, but otherwise the same. He rose when he saw me, his quiet face transformed by a wide smile.

"*Salaam alaikum*, Haibatullah!" I said as we shook hands, bowing low to each other.

"*Wa-alaikum salaam*, Kularakh *Sahib*." (Asian people can never say Clark.)

I followed him into the narrow, dark hall. Like me, Haibatullah was a wanderer. Leaving and meeting his friends he regarded as a normal way of life. He led me into a shady room, entirely bare except for a light red rug. Upon this we sat, sipping tea as easily as though we had parted but yesterday.

In true Asian style he asked courteously for my father and mother and my brothers. I asked about his family. Then Haibatullah told me all his adventures of the past nine months. He had lost money in a deal in Baluchistan raisins, made money in pocket knives, traveled all over by train and by donkey, and had ended with happy memories and no more and no less money than he had started with. Haibatullah is a cheerful soul and he seemed in as good spirits as though he had made a thousand rupees.

"Well," I asked, "do you think you can settle down to a quiet job as my assistant again?"

"Sahib," said Haibatullah, starting to smile, "no job with you will ever be quiet! You're as much a nomad as we Turks. Surely I'll work with you again—I've been waiting here for three weeks!"

This was what I had hoped. We talked a little more, arranging further plans. I raised his salary from fifty to eighty rupees (\$17 to \$25) per month, which I could see pleased him deeply.

When our tea was finished, I left him. My taxi man was asleep on the front seat with his turban out one window and his bare feet out the other. I waked him and we careened back to the airport hotel.

The next day at noon I went to the Ministry. I was to see Mr. Ikramullah, the Assistant Secretary of the Pakistan Foreign Ministry. He corresponded to our Assistant Secretary of State; receiving an appointment with a man of his position so quickly was most encouraging.

A messenger led me through a maze of corridors to the door of a

conference room. In a moment Mr. Ikramullah appeared, having left his conference just to see me. He advanced, hand outstretched.

"Dr. Clark, how nice to see you again! What can we do for you?" He developed the conversation with the ease of a trained diplomat.

I was delighted to see him, I replied, but he was obviously busy. He assured me that he could spare a short time (he was leaving tomorrow morning to visit America), so I explained that I had returned with money and supplies to last twenty months. I wished to arrange customs exemption on the items to be given away, and to arrange permission to enter the Gilgit Agency. Also, I wanted instructions about the routing of my various technical reports.

"Oh, yes—your reports. We want to thank you for those geologic summaries you gave us last year—excellent and practical! But first of all"—the keen, dark eyes were friendly but extremely penetrating—"tell me, what do you plan to do up there in Gilgit and Hunza?"

"First I plan to distribute a shipment of vegetable seeds which I brought from America. Then I'll open a woodcarving school."

"Woodcarving—why? Are they craftsmen up there? Is there suitable wood? How can they compete with Kashmir? Where will they find a market?" His keen interest heaped question on question.

"They are intelligent people, Mr. Ikramullah, and can be taught craftsmanship. They have plenty of apricot wood."

"Has that ever been used before?"—doubtfully.

"No, but I tried it and found it excellent, close-grained and hard, with a beautiful pattern. The Hunzas won't compete with your Kashmiris, they'll make a different product. Kashmiri woodwork is usually brass or mother-of-pearl inlaid in walnut. We'll use apricot as our basic material, make a wood inlay and use local designs, which differ from Kashmiri. Marshall Field and Company in Chicago has agreed to take a trial lot, provided I can teach the Hunzas to do acceptable work."

He smiled, "You have it all planned out, I see. What else will you do?"

"I'll open a small dispensary. It is seventy miles from Hunza to Gilgit, where your government hospital is located, so the people need medical care. Then I'll teach some boys to catch rare, high-altitude butterflies for the Carnegie Museum of Pittsburgh. Other boys will start experimental gardens up in the high mountains, raising the beautiful wildflowers for seed to sell in America. Of course, I'll go on with the geologic survey also, trying to find useful mineral deposits. I intend

to send your government reports from time to time about all of these things."

Pakistan had only two geologists whose training equalled mine, and both Mr. Ikramullah and I knew it. My geologic work would be a tremendous benefit to Pakistan, and they would receive it absolutely free.

"Those plans are excellent! Excuse me a minute while I telephone." He bent over a desk phone and spoke rapidly, in Urdu, then turned again to me. "I've just been talking to the Secretary General, Mr. Mohammed Ali. He says that you should come to see him tomorrow at 6:00 P.M., and he will handle all of your affairs."

I thanked him and left. This couldn't be better—Mr. Mohammed Ali, the Secretary General, corresponded roughly to our vice president. Men at this high level were not bound by red tape, and could really expedite my trip.

I kept my appointment promptly with Mr. Mohammed Ali the next day. Seated behind a large desk in an almost bare room, he rose as I entered and shook hands. I sensed he was a man of enormous nervous energy which he held in perfect control.

"So glad to see you again, Dr. Clark." His brilliant eyes never left my face as I sat down in the chair he indicated. "Mr. Ikramullah told me a little about your plans and your needs, but I should like to know more."

I explained in detail while he listened carefully. This was one of the great architects of Pakistan; he and Sir Zafrullah Khan and Liaquat Ali Khan had helped Jinnah with their plan, and now he was steering that master blueprint through to the building of a nation. I could feel him testing the parts of my small project as I gave them to him, seeing how this would fit here and that would help there.

When I was done speaking he raised his head. "Yes," he said quietly, "that is good, and we will cooperate. Mr. Akhtar Husain of our Foreign Ministry will handle all permits and other details for you."

I remembered that his usual working day was twelve hours, and wasted none of his time with unnecessary formalities.

Another be-turbaned taxi-driver took me the three miles from the Secretariat to the Foreign Ministry at Clifton. Karachi has an oddly raw, bustling note, faintly like Texas and utterly unlike anything else in Asia. The great new government buildings rise like scattered mountains from the flat desert, somewhat like the buildings of Texas Tech College at Lubbock, but on a larger scale. No one ever knew where anyone's office was, an inevitable development when a government and

capital are being manufactured out of whole cloth. The leaders of Pakistan have accomplished one of the great achievements of Asian history, bringing together eighty million disunited people and several million refugees, and building a nation from scratch. They did this in the face of Indian opposition which stopped their railway and telegraph lines, roused the people of their largest cities into seething riot, and denied their infant government even such elementary necessities as desks, chairs, and file cabinets. They have not only built a nation out of this chaos, they have built a government which ranks with that of Turkey as one of the best in Asia. I felt it a privilege to be associated with them.

Mr. Akhtar Husain, a handsome and polished young man interested in mountain climbing, sent me to a Mr. Burney (he and I were to have many future dealings), who was Joint Secretary of the Ministry of States and Frontier Regions. To my delight, he told me that my permit to enter the Gilgit Agency would come through in a few days. As I left the Secretariat and walked down the steps into the awful heat of the street, I congratulated myself. One wrong move might have held up my permit for weeks. As it was, I could now be certain of arriving in Hunza at planting time.

Next day I received a telephoned invitation to tea with the Foreign Minister, Sir Mohammed Zafrullah Khan. He was also Acting Prime Minister during Liaquat Ali Khan's absence. My project was certainly receiving top-level attention.

His butler (a Hunza man, I noticed with interest) ushered me into a cool, airy living room, and in a few minutes Sir Zafrullah came in. We sat down, and as he rested his long body in a cane armchair we chatted affably for some time. Suddenly his alert face with its grizzled beard turned to me.

"Dr. Clark, I'm surprised you have so low an opinion of us!" he snapped.

"Wh-at?" I was completely confused.

"Surely you must know we see *Life* magazine," * he said. "Last January some American correspondents published a statement that the people of Hunza wanted to join the United States." He looked straight at me. "The people of Hunza never heard of the United States until you came. Therefore, you must be working for your country to win our northern frontier away from us. Explain these accusations that I have put to you!"

* January 30th, 1950.

"Sir," I said, a little dazed, "when I first came to Pakistan, I explained that I would tell your people America was a great country and Pakistan's friend. This I have done and no more. Talk of joining America is silly, and I'm sure *you* know I know it! Can you control the stories your own journalists print about us? I have even less control over American journalists."

"That is true," he admitted, "but geologic knowledge is strategic knowledge. How do we know how much you'll tell your Government?"

"I am after all an American—"

"No, you are first of all an American. Now continue!"

"—and in time of war I would tell my Government all I knew about you or any other country. But in time of peace I'm a geologist and you are my client; professionally, I'll release nothing of any economic significance. Fair or not?" I was angry.

"Good, good!" he chuckled. "If you had tried to lie to me, or to sugarcoat things, you wouldn't have got one foot beyond Karachi. I believe you're telling the truth and I'm going to see that you get your permission. But remember—a lot of people in our Government were angered by the article in *Life*. You'll find opposition and suspicion which you didn't face on your last trip."

I relaxed, feeling as if I had just dodged the proverbial ten-ton truck. A single wrong word, and my whole project could have been ruined.

As one day followed another and my permission to enter Gilgit failed to arrive, I realized that, as Sir Zafrullah had warned me, I was facing real opposition. Mr. Burney kept putting me off each time I called at his office. Although the idea that the United States wanted to annex Hunza sounds fantastic to an American, it was very real to a Pakistani. These people had just been released from British rule, they were still bleeding from India's attempt to overrun their country, and at the present moment Afghanistan and China were rattling sabers at them. At this time, also, I began to sense that a grave error I had made on my last trip had caught up with me.

When I had first entered the Gilgit area two years before, the local people had all told me how much they loved Pakistan. During the Kashmir Revolution, the Pakistan Government had earned tremendous popularity with them by aiding their struggle to free themselves from the Rajah of Kashmir. A fine spirit of camaraderie had grown up between the local men and the Pakistan military advisers in the area. After the

truce had been established, this spirit slowly deteriorated. The stress of civilian bureaucracy and the privations of daily life put too great a strain on the new relationship. Other things occurred; the price of salt, formerly eight rupees per maund (\$2.40 for eighty pounds), had been permitted to rise to eighty rupees per maund, or about thirty cents per pound. This was prohibitive in a region where the average annual income was twenty dollars per family. Consequently some people had tasted no salt for over a year. Worst of all, a smallpox epidemic started near Astor, seventy miles southeast of Gilgit, and killed off a great many children (the adults had been vaccinated by the British before Pakistan became independent). The local Pakistan military officers pleaded with the Agency Surgeon, a British-educated doctor named Mujrad Din, to come to Astor, but he did not go.

Major Tafael, Captain Abdullah Jan, and other Pakistan military officers had then distributed salt on their own initiative, and managed to avert open disorder. These men deserve the highest gratitude from their country, for they risked their own money and their careers to save the district for Pakistan. In the tension of the situation I forgot my rule of non-interference and wrote a report to a Pakistan Government agency. This was a mistake which was ultimately to damage my project; it was a Government matter, and hence none of my business. Nevertheless, an exceedingly rapid investigation was followed by a shipment of several plane-loads of salt to Gilgit, a reduction in the price of salt to forty rupees per maund (the actual cost of transportation), and also an immediate field tour by the Agency Surgeon. Few governments would have given such swift attention or so thorough a remedy to a local situation. The people in Astor appreciated this, but their personal bitterness abated only slowly.

All this had happened just a year ago and now, waiting in Karachi, I was feeling the first effects of my improper action. I knew that some Pakistan government officers appreciated my motives, if not my method, but the local officials of the Gilgit area, particularly the political agent, were understandably furious with me. Also, here in Karachi, several very important officials felt that a foreigner who so interfered in their government's affairs should not be admitted to the Gilgit area again. Since Pakistan is a regularly departmentalized government, the officials who had already approved my trip couldn't issue a flat order to their colleagues in the Ministry of States and Frontier Regions to give me my travel permit. It must be decided through conferences and discussions, which took time.

Thus started the most disagreeable six weeks of my career. I waited, day after day, with no real assurance that permission would be granted to go to Gilgit and Hunza at all. Haibatullah came to my hotel every morning, and gave me a three-hour lesson in Central Asian Turkestani, but I was too worried to apply myself to grammar. The days grew hotter and muggier, until I feared that my fine vegetable seeds would sprout and die in their packages. Planting time for Hunza came and went. Now I would have to hold the seeds a year in order to plant them, and many would not germinate.

The younger members of the American Embassy staff were extremely kind. They invited me to their homes for supper, introduced me to their friends, and did all they could to help me forget my worries. As I visited with them and saw how they met the thousand different problems of America and Americans in Asia, I realized that the younger career foreign-service officers were as fine a group of men as any country ever had to represent it. My special friend was a long, lean, easy-going Oklahoman named John Bowling, Information Officer for the American Embassy. Bowling was a mountain climber without mountains, but he did the best he could around Karachi. He had found some low, rocky ridges at the mouth of the Hab River, twenty miles from town, and on Sundays we would go out there, equipped with ropes, and practice scrambling over them the hard way. John's prematurely bald head was tanned so dark it didn't even glisten in the muggy sunlight, and his slim build, black hair, and brown hue made several Sindhi nomads who met us mistake him for a Pakistani.

Every few days I would make the round of government offices again, only to be put off by Mr. Burney at the Ministry of States and Frontier Regions. I slept a good deal because the sudden change of climate, plus the switch of eleven and one-half hours standard time, had completely upset my normal habits. I also developed a mild dysentery, which would not respond to treatment. This, like the enmity of certain officials, was to remain with me throughout my entire stay in Asia.

On June 6th, in the boiling heat of Karachi's summer, I was called to the Ministry of States and Frontier Regions, where a certain official gave me a furious reprimand for not minding my own business. The following day, without further discussion, he signed my permit to enter Gilgit, and Haibatullah and I were under way at last!

The Pakistan Government had courteously given me customs exemption on everything except a few gifts, like the new hunting rifle the Mir of Hunza had asked for, but it took the combined efforts of twenty-

two officials of the customs service to get my ton-and-a-quarter of luggage through all the normal red tape. At 5:45 that evening Haibatullah and I parted from the customs service exhausted but still friends, loaded our eight heavy boxes onto a camel cart, and rode with them to the railroad station. We fought off a mob of shrieking coolies, obtained permission to carry overweight baggage, found more officials, signed more forms, and staggered onto the 7:00 P.M. train to Peshawar, completely dazed.

At Peshawar, coolies with pushcarts took our eight boxes through the Sunday morning sunshine to Dean's Hotel, the famous hostelry of foreigners bound west to Afghanistan or north to Central Asia. On Monday morning, Haibatullah and I applied at the local office for permission to take our luggage on the plane to Gilgit. The standard allowance was three quarters of a maund, about sixty pounds. We had thirty-four maunds, which required official permission and payment at forty rupees (about \$12.00) per maund. To go by caravan would take a month; the plane would take an hour and a half, so the expense was justified.

On Tuesday we waited for the permit.

On Wednesday the permit arrived. It was for thirty-one maunds, not thirty-four. I would have to make application all over again for three additional maunds. This seemed more than either Haibatullah or I could endure. He said the trip was bewitched. I admitted that I was angry enough to blow up entirely. We agreed that it was useless for both of us to stay in Peshawar. He should go directly to Gilgit, unload the luggage, and get things started. I would come along as soon as I could.

So Haibatullah and seven of the boxes took off next morning and I returned to another day at Dean's Hotel, quite numb from delay, frustration, and dysentery. The new permit arrived on Friday, and on Saturday morning, June seventeenth, I climbed into the plane for Gilgit, eight days from Karachi and fifty-one days from New York.

CHAPTER II

By Plane and Horse to Hunza

THE battered C-46 of the Orient Airways, still in its wartime olive drab, flew northeast toward the mountains. We climbed steadily, but the brown, rocky foothills beneath us grew so high that we never rose very far above the ground. As we approached the higher ridges we could see the scattered juniper scrub give way to patches of green-black pine forest. Suddenly a ridge loomed directly ahead of us. The plane bounced on the updraft before it, slid precariously between a pine tree and a rocky ledge, and we were across Babusar Pass, flying quietly over the canyon of the Indus, a silvery-almond ribbon two miles below us. Some day a passenger is going to have heart failure crossing that pass!

We flew east, then north, following the great bend of the Indus. Nanga Parbat, the Naked Peak, reared its terrible crest two miles above us to the right, so massive that it took fifteen minutes to fly past. Then the plane turned northwest, up the valley of Gilgit River, and began to settle slowly for its landing.

Once more I saw the familiar mountains which I had climbed last year. There was Jutial Canyon, and there was the big granite vein. That patch of trees was the Political Agent's house, and there was the Gilgit bazaar; beneath us was Dunyor village, where my friend Rahabar Shah lived. We made our approach turn, cleared a gully by thirty feet, and bounced along the rough, grassy airstrip of Gilgit field with a cloud of propeller-blasted dust behind us.

I saw the usual small group of military and civilian officials emerge from the radio control hut to greet us. A stout, familiar figure in lieutenant's uniform hurried across the field, flung his arms around me.

"Salaam alaikum, Sahib! Salaam alaiku-u-um!"

Lt. Jamshed Khan, youngest brother of the Mir of Hunza, was giving me a real Moslem greeting, his round, blond face beaming with hospitality.

"We're so glad you've come back! The Mir Sahib says you're to

stay at his Gilgit house until you are ready to come to Hunza. Are you well? And are your father and mother well, God willing?"

I thanked him for his courtesy and asked about his family. Then he hurried off to superintend unloading.

Karim Khan, uncle of the Mir of Nagir and airport official for the civilian government, stepped forward immediately and shook my hand heartily.

"Greetings from all of us, sir! It is really good to see you again. What can we do to make things easy for you?"

"Thank you, Karim Khan Sahib." I beamed back at him, "Did Haibatullah arrive safely?"

"Yes, and he has met every plane since." Karim Khan spoke excellent English. "There he is now, over at the edge of the field. He has been staying in town with some Turki friends of his" (everyone in Gilgit knows what everyone else is doing), "but your luggage is on the porch of the dak's bungalow."

"Hah, and you've brought more!" Jamshed Khan bustled over, busy and important. "I'll see that a cart takes your things over today."

I thanked them and walked to the edge of the strip to meet Haibatullah.

"Everything OK, Haibatullah?"

"Certainly, Sahib."

"Then let's walk to town."

It was pleasant to walk along the shady road, with our feet stirring little clouds of the pale tan dust, and the irrigation ditches trickling softly beside the road. The brilliant sunlight on cornfields made the shade of the great cottonwood trees feel cool and pleasant. Small children scurrying around like pert, brown chipmunks only accentuated the leisurely pace of the whole road. Here you stopped to talk to your neighbor, and sat down in the shade when you felt like it.

We made the turn at the east side of the military headquarters, followed the road outside its big south wall, angled up its west side, turned west again, and entered Gilgit bazaar. The bazaar was a broad, unpaved street, shaded by huge cottonwoods and silver-barked chenar trees. Little open-front booths of unpainted wood turned brownish-black with age lined the street. Most of them displayed grain and rock salt in burlap sacks, and pulse and curry powder in pottery jars. There were two blacksmith shops. One larger store, that of the Aziz Brothers, sold canned foods, candles, and other such necessities of the well-to-do. Scattered about the bazaar were many little cloth shops, their cotton

prints making bright spangles of color along the umber street. Last year the material had been almost all homespun cotton from Chinese Turkestan and machine-made cloth from Shanghai, but now I saw big bolts of Indian, British, and Pakistani goods.

In the middle of town the street widened to an open, shady court, raised and curbed like a tiny village square. Here sat knick-knack peddlers of all description, plus a sprinkling of local farmers selling fruit and vegetables. An old Pathan was shoeing a horse, wedged in between a fruitstand and a pushcart full of pocket mirrors; whenever the horse stirred, there were cries of alarm from both sides and twenty or thirty people rushed to restrain him. Other people were sitting quietly, standing quietly, even arguing quietly all around the shady court. Their clothes were tattle-tale grey or brown; the only bright color in the scene came from the bolts of gaily printed cotton in the cloth shops.

Suddenly Haibatullah nudged me. "Here comes a surprise for you, Sahib."

Ahead, walking very shyly toward me, were my two Hunza boys, Gohor Hayat and Sherin Beg, the Army suntans which I had given them last year bleached almost as white as their snowy Hunza caps from repeated washings. Although shorter and younger, Hayat was, as usual, walking a little in advance. Sherin Beg trailed behind, shuffling his feet in embarrassment.

"*Salaam alaikum*, Sahib!" they murmured.

"*Wa-alaikum salaam!*" I returned. "I'm very glad to see you here. Did you walk all the way from Hunza?" (I was the American Sahib and must act like one; to have shown any real pleasure at this meeting would have broken custom and painfully embarrassed them.)

"*Zarul!* Certainly we walked. It is only a three-day trip." Hayat suddenly grinned, the fun of it breaking through his shyness. "Besides, no airplanes fly between Hunza and Gilgit yet."

I smiled. "No—that's true. But you might have had a horse."

It was good to see them again. They both looked well, so the spring-time famine could not have been too hard this year.

They walked respectfully behind Haibatullah and me as we made our way to the Mir's bungalow. I remembered my first meeting with them, a year ago. Hayat had been working for my Gilgit neighbor, a well-to-do farmer who promised him food, clothing, and five rupees per month. At the end of the first month the man paid the wage, but not the clothing. Hayat, an independent character even at thirteen, quit and walked the seventy miles home to Hunza.

Two weeks later he came back to Gilgit and showed up at my headquarters with a small parcel.

"Here," he said, "I have brought you a gift."

"Won't you come in to tea?" I asked.

"Yes, Sahib, thank you." I opened the package of walnuts and dried mulberries, thanked him for it, and we had a tea formal enough to satisfy his dignified soul. He wanted work, of course, but was too proud to say so; he was also too small to be employed as my field assistant. Perhaps he could function as Haibatullah's errand boy around headquarters, but I didn't know how Haibatullah would feel about this. I looked down at the proud, square-jawed face, intelligent green eyes, and curly brown hair and said, "Gohor Hayat, there is a business matter I'd like to see you about in the morning. Could you come back then?"

"Surely I'll come, sir."

He told me that he spoke Urdu, Brushuski, and a little Sheena, the three commonest of the eleven basic languages in the district.

After he left, I glanced at Haibatullah.

"He looks like a worthless brat," I remarked casually.

"He's a good boy!" Haibatullah snapped.

"I'll bet he lies and steals," I said, because I liked Hayat too, but I wanted Haibatullah to feel that the idea was his.

"Sahib," said Haibatullah very earnestly, "that is the best boy I've seen, and he needs help. After the two worthless Gilgitis we've had, he'll be a pleasure. You hire him, and I'll pay for anything he steals!"

So I let him persuade me, and the next morning I hired Hayat. From the day of his employment, he proved himself a fine and gallant gentleman.

Four days after this the Gilgit Agency surgeon told me that he wanted to find a job for a fourteen-year-old Hunza boy who had worked in Gilgit for a Pakistan Red Cross team. Sherin Beg was a slim, brown boy with black hair and eyes, and delicate features which showed his Persian ancestry. I knew that he was a good boy; after all, it meant only food, clothes, and eight rupees per month, so I hired him, too.

Now these two boys were trotting along behind me, a year older and very much wiser. Last autumn I had given each of them some money, explaining that even though I was going to America, they were still in my employ and that their main duty was to attend school regularly. (The Agha Khan had started fourteen primary schools in Hunza. Unfortunately, this first entering ray of civilization had yet to reach the great majority of Hunza people.) Now I learned, in a disjointed

conversation over my shoulder, that Hayat had finished the fourth grade this year, and Sherin Beg the third. I praised them, and told them their pay would now be thirty rupees per month.

As soon as we were inside the gate of the Mir's compound, Hayat caught up with me. "Here is a note from the Mir Sahib," he said.

My dear John, [I read,] so glad that you can be with us again. My family and I send our greetings and await your coming. I have sent your two servants to help you on the road. Please be very careful in Gilgit—you understand the situation, I am sure.

MD. JAMAL KHAN
MIR OF HUNZA

So my political problems were common knowledge! This was bad, because it meant that the opposition to my coming was very strong, or it would never have been discussed so openly.

The Mir's "bungalow" consisted of an entire group of buildings. The large main house was of gray granite with deep porches running around two sides. There were various smaller adobe buildings, one for Ayash Khan, the Mir's brother and confidential secretary, and a long, low shed to serve as quarters for the servants or for any visiting Hunzas who happened to drop by. The buildings and a high wall enclosed a lawn set with ragged flower beds, marked off by several rose bushes and four splendid trees. (Inside the Mir's house I discovered, to my surprise, that all the rooms with exception of one, which was locked, were unfurnished. The Mir carried rugs, furniture and all his personal effects every time he traveled over the tortuous trail from Hunza to Gilgit!)

That afternoon, the Pakistan officer in command of the Gilgit Scouts (a local militia) lent me a mule cart and driver to move my heavy boxes from the government bungalow, where they had been stored pending my arrival, to the Mir's house. Haibatullah and the boys superintended this while I made my courtesy call on the Political Agent, Mr. Mohammed Alam Khan, known to everyone as "the P.A."

I walked up the shady lane toward his bungalow with considerable hesitation, knowing that he was very angry with me. My letter of a year ago had been critical of his administration and had caused him to lose face, which he would never forgive. I reflected that he held an extremely powerful position as supervisor of all the Pakistan Government's affairs, as well as of all foreigners in Gilgit and in the surrounding native states. He was a combination of chief justice, county commissioner, and ambassador, with wide discretionary powers; not an official whom it was

pleasant to have for an enemy. As I approached the gate of his residence, the Gilgit Scouts on guard brought their rifles to a rattling salute, and I stepped through onto the beautiful lawn.

The P.A. was sitting in his big chair under a huge chenar tree. The writing table before him was piled high with government papers. He wore an open-necked white shirt and Western flannel trousers, which contrasted oddly with the large brass hookah beside his chair.

"Good afternoon, Clark—good afternoon!" His English had a marked British accent. "Sit down, please! How are you?" His teeth gleamed white beneath his magnificent moustache as he rose to shake hands with me. He was no taller than I, but quite stout; a little moisture made highlights on his bald, brown head. A stranger would certainly have thought his flashing smile and hearty tone were a true welcome. I had to remind myself that here was a shrewd, veteran politician, skilled at hiding his feelings even when bitterly angry, or I would have been deceived.

"My greetings to you, sir. It's good to be in Gilgit again. Have you had a pleasant springtime?" I pursued the usual Asian conversational custom of polite small talk. "And have you been able to visit your home at Abbottabad?"

"Yes, thanks, to both questions. Now let's get on to your affairs. What are your plans? And what is in all those big, heavy boxes? And how can we help you?"

"I've brought my shipment of vegetable seeds—"

"Fine!" he broke in, "I have a young fellow here as agricultural assistant—trained at Lahore—to run an experimental farm and my gardens. You can give them to him, and he'll handle distribution for you."

"I'll be happy to give him a sample," I said. "I've brought along tools and medicine, and all the camping supplies I'll need. Oh yes, there is a fine Western saddle and four McClellan saddles."

"Well," he said firmly, "I think it only proper that I inspect all of this equipment."

"Surely," I said, "as soon as I have it unpacked I'll send you word." Actually, he had no right to inspect my luggage without a warrant but, since he also had authority to issue warrants, there was no point in my objecting. So I did the next best thing and made a virtue of the situation.

"I'll be delighted to show you my things," I told him, "for two reasons. First, I know you are as interested as I am in the development of this area and will appreciate the fine equipment my American friends

have sent for these people. Then, also, the foreign minister in Karachi told me some irresponsible people had started the bizarre rumor that I was bringing in propaganda leaflets, and maybe even a radio transmitter. After you have inspected my boxes, you'll be able to stop all those silly tales."

"Hmph, hmph, hmph!" He had no desire to be a witness in my defense, but he'd asked for it! "Who could have said such things?" Abruptly, he changed the subject. "Did you buy the camera for me?"

I assured him that I had bought him a good one, and explained that I would appreciate the use of a small Government building for a Gilgit headquarters, since no private buildings were available. He replied with a worried frown that he was really very crowded for office room, but I could have the old, disused girls' school. The place he indicated was small, but would do very nicely. All I needed was a place to stay whenever I was in Gilgit for conferences with the Pakistan government officials, or doing geologic work in the vicinity, or passing through on my way to Lahore for supplies. I knew that there was a severe shortage of government housing, and that the P.A. was being generous with me. I thanked him, and excused myself to make my other calls.

Up the hill two hundred yards was the Agency surgeon's quarters, white among the trees of his wooded lawn. Although his name was Mujrad Din, he was either "the Agency Surgeon" or "the Doctor Sahib" to the whole district. Dr. Din had spent twenty years in Edinburgh, received his doctor's degree there, and married a stout, honest Scots-woman. She was the blunt, motherly, deeply kind sort of woman who immediately became "Mommy" to everyone who knew her. Mommy opened the door for me now.

"Come in, Dr. Clark," she said quietly. I followed her into their cool living room, furnished like an English parlor. In a minute, the doctor came in. He was short, brisk, and lithe as ever in spite of his fifty years, his dark brown face and black hair set off by the European clothes he always wore.

"Hello, John!" he said, shaking hands with me, "sit down."

We exchanged greetings casually, but Dr. Din was no politician. Within five minutes he turned to me nervously.

"John," he said, "I must know the truth. Did you write a letter to the Pakistan Government last year? And in it did you say bad things about me? Did you say. . . ." He then repeated a particularly vicious tale that had been circulated about him in Gilgit.

"Dr. Din," I replied evenly, "I wrote a letter to the Pakistan

Government. I said about you only this: that smallpox was raging in Astor, that children were dying there, and that you had not gone to help. I said the people of Hunza and Nagir had not seen a doctor for two years. I said the people of Hunza and Astor were very bitter. That is all I said about you."

"That was not your—" he began furiously.

Just then Mrs. Din cut in firmly that she remembered my telling him all this to his face, so I had not been dishonorable. I respected her honesty. This must have been a painful admission and I admired her courage in making it. We managed a difficult conversation and, after a suitable interval, I took my departure. Walking down the hill again, I reflected that the doctor would never forgive me. Then I thought of the babies at Astor and was glad I had written.

When I returned to the Mir's bungalow, all the packing boxes were there in a row in the middle of one room, and Hayat and Sherin Beg were circling them with hungry eyes, like a couple of American children looking at Christmas boxes.

"Well," I said casually, "if you two aren't tired, maybe we'd better get these boxes open." Never has a man had more willing assistance! Darkness caught us before all of the box covers were pried off. We couldn't unpack by candlelight, and the tiny, smoky kerosene lantern in the bungalow was no better, so we unpacked only the bedding. I had brought a bedroll for Haibatullah, another for myself, and a pile of blankets for Hayat and Sherin Beg. I also unrolled three air mattresses.

Then I started to blow one up.

"Hai!" said Sherin Beg, "it's growing fat! Magic!"

"Sahib," Hayat asked, "is that just your breath inside, making it grow like that?"

"Yes!" I panted at him.

"What are they for?"

"To sleep on. You blow this one up while I take the last one. I'm running out of breath!"

"Crazy talk," said Beg, "sleeping on air! It won't hold us up."

"Try it!" I told him. The first mattress was inflated by now and I was catching my breath for the second.

Beg sat on the mattress. Then he lay on it and bounced. "*Shaitan!*" he said, "this is comfortable. But I never have seen hard air before. What devil's work will you Americans think of next?"

Hayat looked at me anxiously. "But there are only three here, and there are four of us."

"Oh, I don't like them!" I lied cheerfully, inwardly cursing myself for forgetting to bring four mattresses. Now, damn it, for the next two years I'd watch them sleep soft while I laid my bed-roll on the floor. That night they slept on the lawn and I, as befitted my dignity, placed my bedroll on the porch. It was cool, and there weren't many mosquitoes.

The next morning we really unpacked. Saws, hammers, a fine axe, shirts, pants, socks, shoes, hiking boots, sneakers, baking powder, two mountain tents, three Erector sets (they hadn't the faintest idea what these were), rifles, aluminum pans, two whole cases of atabrine, surgeon's instruments, the four McClellan saddles and the beautiful Western saddle, underwear, warm coats for winter, soccer balls, knives for trimming mica, seeds, two thousand paper bags, four coils of sash cord, one hundred feet of the best rope they had ever seen, two yards of copper screening (to sift flour), three whole cases of various medicines, and almost three thousand other things.

I felt like Alladin with his lamp, answering the continuous "*Yih kyah hai?*"—"What's this?" and "*Wo kyahchez karta?*"—"What does that thing do?"

It was mid-morning before we finished. Hayat looked around the room, his eyes resting on each mound of fine things, and murmured happily, "*Bhot acha hai! Bilkul khubsurat!*"—"It's wonderful! Perfectly beautiful!" He didn't know the weeks of careful planning, the pages of lists and cross-indexed cards, which had gone into accumulating all of this. But he did know that every need he could possibly imagine had been provided for, and that everything was the finest of its kind he had ever seen.

I took out the seeds and divided each large package in half, one for Gilgit, and one for Hunza. Then I divided the Gilgit portion in half again, one for the P.A. and one for my friend Rahabar Shah, across the river in Duniyor village. I delivered the seed and camera to the P.A., gave the Agency surgeon assorted small items which he had asked me to buy in America, and finally delivered another camera to my good friend Major Tafaal. Because so many things were unobtainable locally, it was the usual custom for anyone going out of Gilgit to act as purchasing agent for his acquaintances.

Haibatullah had mixed rice, carrots, a few potatoes, and some mutton into a gorgeous pilau (Turki stew) for lunch. While we ate lunch, sitting cross-legged in a circle on the Mir's porch, I laid plans with my staff. We spoke in Urdu, which was our only common tongue.

The big problem was to find a caravan. Since the Communists had captured Sinkiang no Turki caravans went north from Gilgit. We needed ten horses, seven to pack and three to ride. I intended to use my old horse as soon as Rahabar Shah, my good Hunza friend, brought him from Dunyor. Haibatullah told me that although there were refugee Turki caravan men in Gilgit, they were all carrying supplies for the Pakistan Government on contract. However, he agreed that his countrymen were the best caravan men in Central Asia and that bright and early tomorrow he would start combing Gilgit to see what he could find. I ended the conference with final instructions to my staff to be on hand tomorrow for the P.A.'s inspection."

"Yes, sir." I was confronted with three rebellious faces. They never argued with me, but they let me know their feelings, and they did not like this inspection.

That afternoon, Rahabar Shah brought my old mountain horse, Bili, back to me. He had kept Bili all winter and had fed him quite well. Rahabar Shah was one of the Hunzas who had emigrated to Dunyor and had become very well-to-do. He spoke good Urdu in addition to three local languages, and understood a little English. As he led Bili toward me, I couldn't help wondering whether I would be so erect and alert at sixty; his black hair and flowing moustache were a little grizzled, but otherwise he might have been a man of thirty. I paid him the rent on which we had agreed for Bili, then gave him the seeds. His lean, brown face beamed with pleasure.

"Clark Sahib, this is very good! This is a great benefit to us! I will plant these tomorrow, and save all of the seed. Next year I'll share with my relatives and with my friend Momin Shah. Within three years you'll see the fine American vegetables all over Dunyor!"

"That's just what I want to happen," I told him. Farming was these villagers' whole life. I knew that all the people in Dunyor would watch the American vegetables in Rahabar Shah's garden. When they saw how superior these new plants were, no man would rest until he also had some American seed. Everyone would benefit, everyone would appreciate that American cooperation had helped him, and the total cost of winning the friendship of several hundred families was only fifty dollars. My Foundation was functioning as planned.

Rahabar Shah started back on the seven-mile walk to Dunyor, and Sherin Beg took old Bili to the bazaar to be shod.

The P.A. and one of his assistants, the Tahsildar, arrived the following morning to inspect my luggage. They had an escort of two policemen.

As they entered, the Mir's *chowkidar* (watchman) and my three lined up inside the room and saluted respectfully enough, but resentment was thick as smoke in the room.

This was their king's house, and not even the P.A. had the right to enter it without permission. That equipment was *ours*, not to be pawed over at will by others! I prayed that Hayat's hot temper wouldn't betray him. I always resent inspection myself, even by American customs, so I knew how he felt.

The two men inspected everything thoroughly. Then the P.A. calmly appropriated several boxes of .22 caliber bullets, my best pair of field boots, and a few knick-knacks, which he said he thought would be nice. The Tahsildar took a belt. They paid me for them, of course, but the boots were irreplaceable in Pakistan and I really couldn't afford to lose them.

That evening, both boys developed high fevers. I figured that it probably was malaria, and gave them paludrine and atabrine. Hayat recovered in a few hours and Beg's temperature came down, but he remained weak for several days.

Two days later Haibatullah reported that no Turki caravans were available. The Mir's *chowkidar* overheard us.

"Hazaar," ("Prince"), he said, "there are very few horses for sale now, but I can arrange for some Hunza men to pack your equipment."

"Good! Have them ready in three days." Our first problem might be solved.

The next morning Haibatullah and I used old Bili to take the supplies which were not in immediate need over to the old girls'-school building, our new headquarters. We followed the road toward the P.A.'s house, and then turned off through a gate in a tumble-down stone wall. To our left, a terrace wall was raised shoulder-high, supporting our neighbor's corn field and giving us an ant's-eye view of the cornstalks. Beyond, a time-blackened door sagged. I pulled it open and stepped through into a narrow courtyard. Two large eucalyptus trees shed their strap-like leaves onto the dust below. The sides of the courtyard were enclosed by a flat-roofed one-story adobe building resembling a shed. Although the three rooms in the south building were black boxes with earth floors, they could be locked, which meant that we could use them to store our supplies. Fortunately, the two rooms in the north building boasted of windows and rough plank floors. We could live in these whenever I was in Gilgit.

While the Mir's *chowkidar* was rounding up men with pack horses,

the boys and I scoured the town for another riding horse. In the old days this would have been simple, because caravans from Turkestan brought in horses every week, and a good riding horse cost not more than two hundred rupees. Since the Communists had closed Mintaka Pass a year ago, no horses had come to Gilgit, and a horse big enough to fit my saddle would cost at least eight hundred rupees. This was more than I cared to spend. Haibatullah told all his Turki friends that I was horse-hunting; Hayat spread the word among the Hunzas; Beg tried the Sheena community of Gilgit. There simply were no horses available. Finally we started to cover every lane and trail on foot, each of us separately, asking every horse-owner we saw if his horse was for sale. The second day, I found a beautiful bay mare. She was sound, and big enough to carry my saddle. Her owner said he'd sell for four hundred rupees, and I snapped up the bargain.

When the boys saw her, they were horrified.

"*Nahee, Nahee, Sahib, aap wo ghoori nahee mungta!*" said Hayat.—
"No, no, Sahib, you don't want that horse!"

"Give her to me," urged Beg, "I'll take her right back."

"Why—what's the matter?" I asked a little resentfully.

"She's a mare!" they wailed.

"So?" I was indignant: my bargain wasn't being appreciated.

"Everybody else uses stallions," said Hayat, "and you'll have trouble every mile of the road. Besides, female animals are no good, anyway. Too weak, just like girl people!"

Then I remembered. The local people never have enough to feed their horses; for this reason, the mare and geldings become weak and unserviceable. In a desperate effort to substitute masculinity for muscle, everyone uses stallions. All they usually get, of course, is meanness; a stallion too weak for work is still male enough to be evil-tempered.

However, I had made my bargain, and anyway our pack train would be ready tomorrow morning, so I told the boys we'd keep the mare, and would call her Rani—"Queen."

Our seven Hunza men and their seven horses arrived at dawn the next morning, entering the Mir's compound with much scuffling and creaking of leather. The horses were the usual scrubby little mountain ponies, remarkably strong considering their condition, but pitifully weak compared with a good horse. Packing those seven horses took more than an hour, even with my boys and a few assorted spectators helping! First, in order to satisfy himself which were heaviest, each man had to heft every box. Since they all weighed nearly the same, there was much

debate: "Your horse is bigger than mine, so he must take those heavy boxes"—"No, those two won't balance, they don't weigh the same!"—and so on. Finally each horse was assigned his load, and actual packing began. None of the men had ever seen a diamond hitch, or a squaw hitch, or any other proper method of roping a pack to a horse. None of them even knew how to tie a knot—their system was to wrap a loose end around a couple of times and tuck it in! One load fell off three times while they were lashing it on. Finally they got the boxes and the horse roped up. The horse's head looked like a butterfly emerging from a cocoon.

Haibatullah watched in silence as long as he could, then muttered to me, "These Hunzas are great climbers, but they're certainly no horsemen!" I hastily whispered, "Sh! If they hear you they'll quit, and they're the best available!"

At 8:30 in the morning the last pack was on. We were ready to start for Hunza. I stepped over to the lead pack horse and tied to his saddlehorn the small American flag which I fly on formal occasions. I then mounted Rani, Haibatullah climbed aboard old Bili, and with Beg and Hayat walking beside my horse I led my procession out of the Mir's compound, down the shady lane, and into Gilgit bazaar.

We turned north past Aziz Brothers' store on the street leading to the bridge. A few children ran to watch, but most of Gilgit simply paused for a moment, then went on with what it was doing. Everyone in town had known for days that the Sahib was going to Hunza and that he would have fourteen boxes and nine horses. The incident had been fully discussed in advance, so that when it actually happened there was nothing left to see. Besides, they had watched hundreds of caravans come and go.

We crossed Gilgit river on the narrow, wooden suspension bridge and turned east along the dusty flats lying between the river and the raw, granite mountain. Even that early it was hot. The sun blazed on one side and the heat reflected from the mountain on the other. It took a full hour and a half to reach the junction, three and a half miles away, where the Hunza River thunders southward out of its canyon to meet the quieter Gilgit river. We rounded the rocky southeast nose of the mountain and turned north up the valley.

The trail was still broad and the flats between the cliffs to our left and the river to our right were fairly wide, but from here on we were never out of hearing of the river. The rushing, tumbling water, gray with sand, rolled three-foot boulders along its bed and tossed cobbles in the air as lightly as spray. Boulders and naked rock formed its banks;

no touch of greenery, nor even soil to sustain it, could exist near such a stream.

By this time we were stopping frequently to adjust the packs and tighten ropes. Haibatullah and I took turns with the boys at riding and walking. We ate lunch beside the river. The pack men left the horses loaded while we ate, so the poor brutes got no rest. After lunch we went on up the ever-narrowing canyon, with dark brown cliffs looming higher above our heads. At several places, the river swung hard against the cliffs on our side; here, precariously high above the water, the trail was held to the rock bluffs by retaining walls of loose boulders, or tacked to the cliff face by rickety wooden brackets, called "*paharis*." These first *paharis* were short and well-built, compared with those which we were to cross later.

That first day's objective was Nomal village, only seventeen of the sixty-seven miles to our goal at Baltit, in Hunza. By mid-afternoon we rounded the last *pahari* and saw Nomal below us, a four-mile-long oasis of green sunk deep among the black, rocky cliffs. In a few minutes we were riding along a shady lane, between fields of rice and wheat, with the trickle of irrigation ditches, like the piping of a flute, playing obbligato to the river's orchestral bass.

We passed through the tiny bazaar, a miniature Gilgit, and a mile further turned into the Nomal dak-bungalow yard to camp for the night. The dak-bungalow chowkidar came running from his house to let us in. He was a sandy-haired Sheena man of about fifty, named Asgar Ali, very meek and gentle, and a good friend of mine. He had once taught primary school in Gilgit, and he and I had spent several pleasant evenings as two old schoolteachers, comparing experiences.

This dak-bungalow, like all others in India, had been built by the British to serve as a hostel for British officers. It was a low, whitewashed building with a peaked roof and wide, wooden veranda. The windows were of real glass, with screens. A string of outbuildings behind functioned as servant's quarters, kitchen, and stables. A low, sturdy wall of mortared boulders surrounded the spacious lawn, which was brightened by flower gardens and shaded by several fine old trees. Beside the porch, branches of an apricot tree were heavy with ripe fruit, ready to drop into the mouth of any Sahib who sat on the porch rail.

Asgar Ali led us to the veranda, chattering happily.

"You can use the south apartment. It is good to see the Hazoor back again. My wife has a cough, and pains in her back, and the bungalow sweeper has malaria, and a boy here is turning pure white in spots, which

makes him much embarrassed. You have brought us medicine as you promised, Sahib?"

"I did not forget, Asgar Ali. As soon as the loads are unpacked, I'll treat patients. Meanwhile—"

"Don't say it, Sahib, don't say it! I remember from last year how you travel and what you'll need. I've already told the lumbardar (village chief) everything you'll want; let's see if I'm right!"

I went in and sat down, while my staff superintended the unloading. I wasn't tired and wanted to help, but this would have implied that I didn't trust my "servants" and was a man of such small importance that I would do servants' work. Great loss of face for everybody.

So I sat in a wooden rocking chair and looked around. The square room had a wooden floor and high, neatly whitewashed walls. A big fireplace in one corner had a narrow mantel, on which rested a few copies of *Blackwood's Magazine* and several dilapidated books. An armchair, bed, table, and several chairs, all home-made, were neatly ranged about. A door led back to the latrine, a whitewashed cubicle containing a grown-up sized pottie chair, and thence to a primitive lavatory. The whole ménage was a monument to British ability to develop a comfortable living room and uncomfortable bathroom anywhere on earth.

Haibatullah and the boys appeared as I finished my survey. "Sahib," Haibatullah reported, "the loads are all unpacked and on the porch. We've unrolled the beds and opened the box with medicine. Asgar Ali has brought food for the horses, and much food for us. He has two chickens and a sheep here; do we eat with you as usual, and do you want chicken or mutton?"

With a glance at the two hungry boys, I told him we'd have both chickens, potatoes, rice, and any other vegetables obtainable. Of course they would eat with me, and Asgar Ali was invited also. Meanwhile, I would treat patients.

As I stepped out on the porch a group of men and boys, in ragged grey and brown clothing, rose respectfully from the lawn. Then my work really began. To this one with malaria I gave atabrine; to a man who had bacillary dysentery, sulfaguanidine; here was one with ascariasis—no supper or breakfast, and he must come back to me for a vermifuge in the morning; and then I saw the boy with white spots. I led him indoors and had him undress, which he did with great embarrassment because to his normal Muslim prudishness was added the horror of his disfigurement. One glance was enough—leucoderma, perfectly harmless but almost incurable. I taught him how to mix a weak solution of

potassium permanganate with which to bathe the spots, then gave him vitamin tablets, ferrous sulfate, bile salts, and atabrine, to suppress his malaria and improve his general condition. So on they came, fourteen in all, until the last one was treated; I knew that if the whole oasis had known of my coming there would have been over a hundred. As my final chore I made up a packet of medicine for Asgar Ali's wife.

By the time I had finished, supper was ready to be served on the porch.

"Sahib," Asgar Ali told me, "I'd like to eat with you, but the whole village is over there on the other side of the wall watching us, and to see me sit down with you would be too much breaking tradition. As it is, they are shocked that you permit your three men to eat with you!"

"*Achcha hai*, Asgar Ali," I said, "we'll set aside your portion and you eat it after we have finished."

He was quite right. The usual Sahib system is to send your servants to find the bungalow chowkidar and sweeper immediately upon arrival. Then the bungalow chowkidar calls the *lumbardar* and, as the village chief, he calls in *his* chowkidar. The four local men learn of your needs from your servants, and after much delay the eggs, meat, flour, horse feed, and firewood are forthcoming. All four of these individuals receive submarginal salaries from the government, as a result of which they take graft and insist upon *baksheesh* from you. If your servants are "loyal," they will resent the local grafting because it reduces the amount they themselves can pilfer without arousing your suspicions. You cannot, of course, travel properly without at least three servants—a cook, a bearer, and a horse-boy. You pay these fellows about twenty dollars per month each, and no food or clothing. You have a horse for yourself and your luggage, but your servants walk. You may ride as fast as you please, but you can't go further in a day than your servants can walk. This is called efficiency: three servants and four villagers to care for one man's needs, the whole ménage tied to the speed of a walk. It costs you several dollars a day, keeps all your people poor, and makes life a hell of continuous bickering and minor graft.

My system was quite different. Haibatullah, Hayat, Beg and I drew clothes as we needed them from a common storage-locker, so we all dressed alike. They ate at my table with me. Haibatullah received his eighty rupees per month, and Beg and Hayat thirty rupees each. We were an outfit, not a master and caste servants, and everyone did whatever job needed doing at the time. Some Asians cannot take such treatment and promptly steal and lie, under the misconception that you

are an easy mark. I had had to fire two worthless Gilgitis for this in 1949. My present staff were gentlemen at heart, and responded proudly to being treated like humans. As a result I had perfect loyalty, no grafting, and a smooth-running outfit.

The caravan men brought their horses at dawn, and had loaded and gone on before the sun rose over the cliffs to the east of us. We ate breakfast and paid our bills. I gave five vermifuge capsules to the man with ascariasis (who told me afterward that they dislodged nine worms as big as American nightcrawlers), and we started after our pack train.

A mile north, the Nomal oasis ended against a granite ridge, and we entered the terrible gorge which Hunza River has cut through the Kailas Range. There were no wide, sandy valleys now. The trail crept along the foot of the cliff, beside the thundering stream, and cliffs two miles high re-echoed the roar of the water from all sides. In places the canyon was so deep that even in midsummer the sun entered only at noon. Over our heads loomed the Kailas mountains, three times as high as the Grand Canyon in Arizona. These rocks were not soft red and pale grey limestone like ours. Threatening, dark-green schists and glossy-black peridotites frowned over us. We wound our way among great jagged boulders, beneath cliffs all fractured and ready to crumble down on us. We crept like beetles over gravel bars along the river, splashed by the flying spray, our horses panting in the loose pebbly sand. We traveled thus for fourteen miles, locked at the bottom of this slot, with the everlasting roar of water engulfing us.

As we emerged from the canyon into the open daylight of Chalt oasis, we met the Kailas cliffs' last effort to impede us. An avalanche had crashed fifteen thousand feet into a gully and brought down the hard-packed snow from the mountains above. Now the snow lay deep across the trail, melting in a thousand trickles under the warm sunshine. We were forced to unpack and lead the horses across, one by one, then carry the loads ourselves, and repack on the other side. Unpacking was simple; the loads were perpetually on the verge of falling off, anyway. Repacking took time, however, and that hundred yards wasted half an hour.

We turned east through the very pretty Chalt settlement, to follow the river up to Hunza, but our way was blocked by a side canyon entering the river. In wintertime this is only a small stream, easy to ford, but now the melting snow of the Karakoram had swollen it into a torrent. We had to follow the stream north for three miles to a very rickety wooden bridge. We led the horses across one at a time, with the bridge

swaying and creaking, then went back three miles down the other side of the canyon and turned east again beside the main river.

Now the trail ran along the south flank of the Karakoram, out in the open sun. The mountains here were steep, and the trail repeatedly climbed across rocky slopes, then descended again to river level, but we were out in the open and felt free again after the shadow of the canyon. Beg started to sing; behind us the caravan men cursed their horses and each other with cheerful impartiality.

Actually, this part of the road was much more dangerous than the canyon. The rock here was full of pyrite, which reacts chemically with the rain water to make sulphuric acid. Small amounts of acid, eating for centuries along every joint and crack, had converted whole mountainsides into masses of crumbly fragments. A single sheep browsing overhead, or even a strong breeze, would send tons of boulders rattling down several thousand feet. The trail had to be re-routed after every landslide. Our present trail climbed precariously over two shaky places which were about to slide. We had been safer in the canyon, where the hard rocks would fall only during a heavy rain or an earthquake. But the canyon was dark, and this place was open and sunny, so we rambled along with never a care except to reach Maiun village by evening.

We were in Hunza, and had been ever since passing the collection of shrivelled apricot saplings and dried-out barley fields named Khizera-bad. Somehow the sky seemed bluer, and the afternoon sunshine brighter, as I relaxed in my saddle. After all the unexpected difficulties, I was in Hunza at last, and could settle down to do my work.

We reached Maiun oasis in late afternoon, and wound slowly through the terraced fields, crossed the solid little bridge over Maiun Nullah (creek-canyon), and zig-zagged up the east bluff. There was no dak-bungalow at Maiun, but the Mir maintained a bungalow here, as he did at every good-sized settlement in Hunza, for his convenience when he toured his country. What a change this was from Nomal! It was a small, sturdily built, adobe cottage, less than half the size of the dak-bungalow, facing west across a tiny lawn to the edge of the bluff we had just climbed. The aged whitewash, the wood-floored porch, and the few remaining panes in the small window were concessions to Europe, set in a structure whose gentle indifference to square corners and straight lines was pure Asia. The lawn was slightly ragged and gaping holes in the surrounding compound wall showed where some passing horse had nudged the loose boulders. The whole impression was that this cottage,

like all of life, was softly and gracefully merging again with Mother Earth.

Inside there were two rooms. The larger had an earthen fireplace, one wooden chair, a shaky wooden cot with a "spring" of plaited rope and canvas strips, and two red Khotan rugs, neatly rolled up out of harm's way. Bringing in glass by caravan, reglazing the windows, and weatherproofing the door would have cost the Mir of Hunza about twenty dollars, but Asia doesn't reason that way. Let your structure deteriorate, but pay a man to roll your valuables out of the way of encroaching dust and rain!

South of the bungalow were the kitchen and servants' quarters. An open yard with a rock manger acted as a stable. Opening from the stable yard was a small adobe building which I didn't recognize.

"What's that?" I asked Hayat. The building was completely without windows.

"The school, Sahib."

"What?"

"Surely, Sahib! You know that for the past few years His Highness the Agha Khan has given our Mir Sahib eight thousand rupees (about \$2,400) every year, to run schools in Hunza. This is Maiun School. You'll see in the morning, if we don't leave too early."

I remembered then that the Agha Khan had started several development projects on the occasion of his Diamond Jubilee. This apparently was one of them. The Agha Khans had strengthened and unified their religious communities ever since the first Agha came out of Iran in 1834; here was an example of Asia helping itself.

We were all tired from the twenty-nine mile trip, so everyone went to bed early. The next morning, while we were eating breakfast, the students appeared—bashful, polite boys of several sizes, some blond and some dark, dressed in the usual grey pants and shirts, with their shirt-tails out as was proper (only Sahibs, Mirs, and important people may wear their shirts tucked in). All of them were barefoot, and each boy carried a wooden slate and a few paper-covered books.

"What do you study here?" I asked one twelve-year-old, in Urdu.

"Urdu language, arithmetic, history, geography, and the Holy Quran," he answered.

"And how many grades are taught?"

"Five, Sahib—this is primary school. If we want more, we must go to Gilgit, but then we must live away from home and we can't afford it.

Five grades are wonderful, thanks to our Father, His Highness the Agha Khan!"

The boy would have thought it blasphemous to figure how much money the Agha Khan and his district representative, the Mir, took out of Hunza in religious tithes. Assuredly, the Agha wasn't losing money in Hunza! However, these people would never in the world have taxed themselves to build schools, and their donations to the Agha Khan were a real spiritual uplift to them. Poor though they were, their gifts and the partial return through the schools were a good thing.

Our caravan moved out, and we followed. As we left Khanabad settlement and started up the next rocky slope, the whole caravan stopped suddenly, and all the men faced south, down the mountainside. Hayat and Beg, who were taking their turn to ride, slid off the horses and stood also.

I looked down. Far below was a low adobe wall, enclosing a tiny square space. Bits of white cloth fluttered from wooden sticks clustered around a low rectangular grave. I glanced quickly at Haibatullah.

"The tomb of a local saint of their Ismailia sect, Sahib," he whispered. "They all get off their horses and say a little prayer in honor of him."

"Would they be pleased if I said a prayer also?" I whispered back.

"Of course, Sahib—but no Sahib has ever done this before, so they don't expect it."

I faced the little tomb, my arms stretched forward from the elbows, Muslim style, and murmured the Sura Fatiyeh, the first chapter of the Holy Quran. The caravan men finished their prayer and we went on again, without comment. A few miles further, Beg sidled over to me.

"That was very nice of you, Sahib, to pay respect to our saint," he said quietly.

On the numerous occasions I traveled that road afterwards, I never failed to stop for a moment at the tomb.

We went on past Hini oasis, dodging two boulder-falls along the way. The larger rocks spun whistling past our heads, while pebbles spattered the trail like shrapnel. The noonday heat had stilled our caravan to the rhythmic scuffle of feet on the dusty trail which tells an experienced ear that a pack outfit is moving right along. The country was growing wilder and more completely desert every mile. Not a spear of grass, not even a low clump of sage sprouted between the boulders of these bare, rock hills, and we were already up to an elevation of seventy-

five hundred feet. Altitude for altitude, these mountains were probably drier than the Sahara.

The trail angled across the face of a dull-brown rocky ridge, and suddenly came to the edge. We stopped without a word, because there were no words for what lay before us. Distance had hushed the thunder of the river. No birds chirped, and there was not a breath of a breeze.

Here below us was the heart of Hunza; a great, open trough stretching away into the distance with the mountains closing in again above the narrow canyon at the far end. Below lay the river, a thin grey gash at the bottom of the valley. The terraced fields, yellow-green with ripening barley, climbed the low slope from river to mountain-foot. They were like the broad, yellow-marble steps of an ancient temple, with dark-green orchards mottling them like moss.

Above the topmost field stood the temple walls—rough, bare precipices two miles high, with dark heaps of fallen boulders skirting their feet. High above all towered Ultar Peak, white in the azure blue, alone and aloof as an ancient god overlooking his temple tumbled about his knees.

The green and yellow of life below, the raw brown and black of the rocks above, and the stark blue and white high over all: this was Hunza.

A tugging at my shirt brought me back to the trail. "Look, Sahib," muttered Sherin Beg, "here is Ayub, the Mir's seneschal. He has come to welcome you, from the Mir Sahib. Look at him!"

I looked hastily. A black horse was tied to a boulder and beside him stood a lean, brown man, clean-shaven, in soft white cotton trousers and a tan, European-style coat.

"*Salaam alaikum*, Sahib," he said courteously in Urdu. "Our Mir Sahib sends his greetings and hopes that the road has not tired you too much. Ours is a poor country, hard to reach, and we are grateful that you have troubled to come to us."

"*Wa-alaikum Salaam*, Secretary Sahib," I answered just as formally, "I found the trip pleasant and am not tired. Yours is a very beautiful country, worth coming a long way to see."

By this time, our caravan men were slouching comfortably all about, resting their backs against boulders and listening to us critically to see if Ayub's greeting and my reply came up to the standards of oratory and compliment which they expected.

"Here is a resting place which has been built for travelers," Ayub pointed out. "Would the Hazoor care to sit down for a little?" There

beside the trail was a small adobe shelter, completely open to the south. I hadn't even seen it for looking at Hunza.

"Thank you," I told him, "but from there it is impossible to see the beautiful valley. Would it too greatly inconvenience you to sit with me on this boulder instead?"

He smiled. "Sahib, I'm a Hunza man. I grew up with boulders and mountains—I'd rather sit out here, if it is all right for you."

We sat on the boulder, and Ayub courteously pointed out places to me as though I had never been to Hunza before. "This is Shishpar Nullah. There on the other side is Aliabad village. Then comes Durkhun. That village perched on the rock is Garelt. Next over there is Hyderabad, and those trees way down along the river are Ganesh. The Mir Sahib's palace is on that low ridge, but you can barely see it—"

"And there," I pointed, "is the old castle, where, with your Mir Sahib's permission, I'll make my home."

There it was, the place I had come ten thousand miles to live in, a small white spot shimmering in the sunlight against the cliffs five miles away.

Our caravan men were bringing their horses back into the trail by now, anxious to finish the trip and go to their homes. Ayub, Haibatullah, and I climbed on our horses, the two boys walked behind us, and with the caravan following we entered the first village.

A swarm of bashful little brown children in baggy cotton pants and shirts surrounded us. "*Salaam alaikum*, Hazoor!" they called, smiling politely.

"*Wa-alaikum salaam!*" I answered, and we went on.

At Aliabad we were met by another group of children, at Durkhun by still more. I turned to Ayub in surprise, asking him how it was that all the children were collected in the middle of each village.

"Our Mir Sahib gave instructions that all the children of every settlement gather to show you respect," he said. "We hope it makes you feel welcome."

I told him that it did, indeed. These children were delightful, neither boisterous nor too shy. We followed the shady trail beneath giant apricot and mulberry trees, past boulder-walled terraces, through little settlements of grey adobe huts, and everywhere the children were out. Children eating mulberries, children perched like chipmunks on the rock walls, children on the flat rooftops, children up in trees, all saluting me respectfully and paying their salaams. Their welcome was friendly and touching.

At last we crossed the rushing Hyderabad creek, and swung into the leafy orchards of Baltit. The grey huts of the Drometing clan, like single-story Pueblo houses, stair-stepped among the trees up the steep hill to our left, and the flat roofs of the Kurukutz clan looked up at us from the shelter of their orchards to our right. The trail circled a deep hollow, then turned south along the side of a long, grassy ridge which extended out from the mountains toward the river below.

A large, rectangular stone building on the shoulder of the ridge looked, somehow, like a ship just come to port from sailing in the valley. This was the new palace of Hunza, not yet quite finished.

As we entered the palace lawn, I swung quickly off my horse. Coming down the palace steps was a stout figure in soft brown British woolens, followed by another in white—the Mir and his brother, Ayash Khan, advancing to welcome me. I tossed the reins to a caravan man and hurried forward, with Haibatullah and the boys following me.

"Hello, Clark, good afternoon!" the Mir said in a hearty voice, his hand extended and his grey eyes smiling. "Did you have a good trip?"

"Excellent, Mir Sahib." I grasped his hand. "It's good to see you again and to be here in your beautiful Hunza. How are your family?"

"All well, thank you." His English was softer, with less harsh accent, than that of the P.A. in Gilgit. "We are happy that almighty God has brought you back to us safely." He turned. "Here is my brother, Ayash Khan."

The dark, brooding eyes and swarthy face of Ayash Khan lit up in a rare smile. We greeted each other and he returned to his place beside and a little behind his brother.

As Ayash retired, I said to the Mir, "This is my assistant, Haibatullah, whom you may remember."

"*Salaam alaikum*, Mir Sahib," said Haibatullah courteously, and returned to his place behind me. Then the Mir extended his hand, palm down, and Hayat and Beg came forward. Each in turn bent swiftly, kissed it, and stepped back. It was strange to see all of us, whom I knew so well as individuals, doing homage to a sovereign like people of the past.

I knew that the Mir was eager to have the things he had ordered from America, and hastened to assure him that I had brought them all. "I have some presents, also, Mir Sahib," I added, "and as soon as we unpack I'll give them to you." He beamed with pleasure; even Ayash smiled.

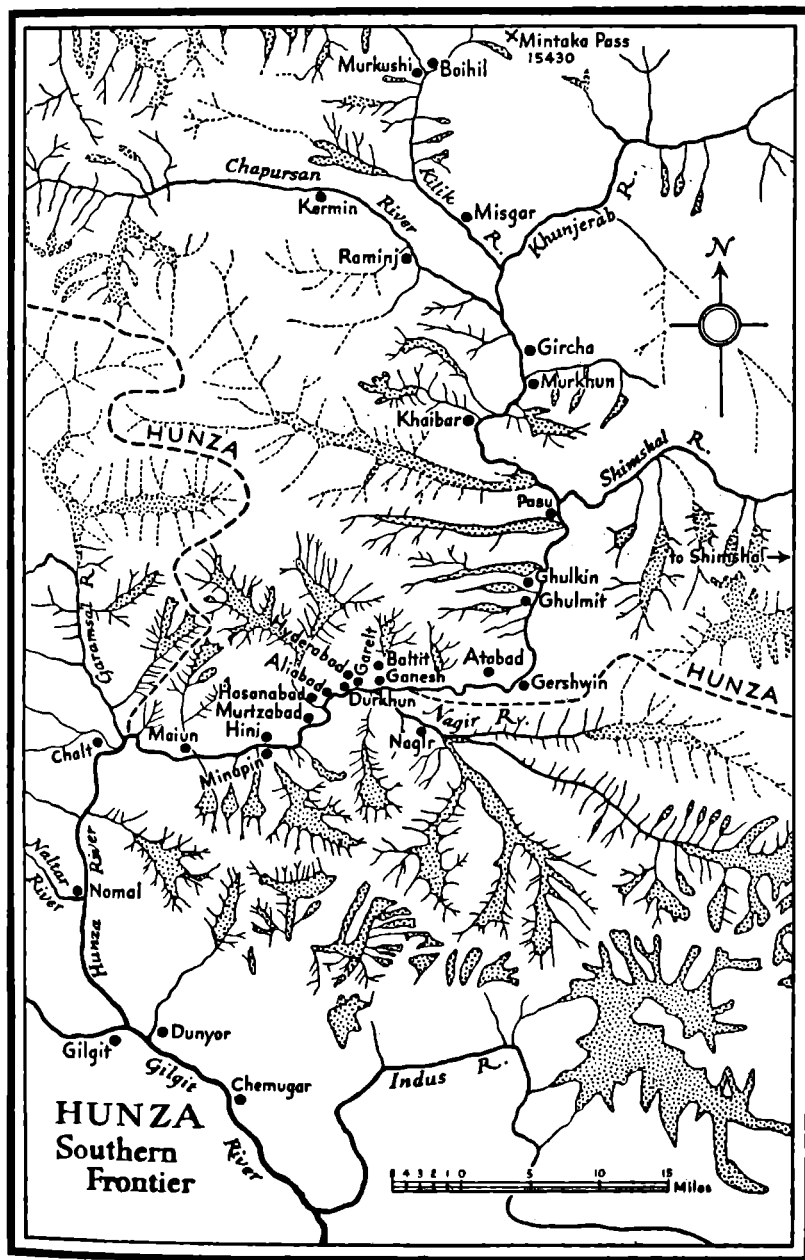
"You will want to wash and rest up after your long trip," he said

kindly. "I've arranged for you to stay in my guest house." He murmured a quick word in Brushuski to one of the servants, and the man ran to tell my caravan to unload. As he led me across the lawn to the guest house, I noticed that he had grown somewhat heavier. He was a stout man, but he did not breathe heavily in spite of the altitude.

After the Mir and Ayash left us, I turned to my staff. Haibatullah was to see that the pack men put the boxes in the living room, locks turned out so we could get at them. As I gave directions, Hayat and Beg stood silently looking at the floor. Neither one had said a word to me since we had met Ayub, the seneschal, two hours ago; a stranger would have thought them sullen, but I knew that this was only the behavior expected of a well-bred Hunza boy in the presence of his Sahib.

"Look," I said, "I'm giving you five weeks' back pay—forty rupees each. I want you to go home now, and be back here tomorrow." They nodded their heads. "Please give your parents my greetings. Explain to them that while I live here in the Mir Sahib's guest house you will sleep at home. When I move to the old castle you will stay there."

"Yes, Sahib. Thank you," they murmured, and turned away like people under sentence. For two years I was to watch this, and it never failed to shock me. Out on the trail or inside our house, they sparkled with verve and fun, but when we were in company, especially in their country, the brightness left them as the sunlight goes from a lake when a cloud blows over.



CHAPTER III

We Move into a Castle

AYUB, the seneschal, opened the door of the Mir's palace and I stepped into a small hall. He opened another door to the right, and murmured, "The American Sahib." The Mir and Ayash rose to meet me. This was the Mir's reception room, and I could feel its friendliness even while I was greeting the Mir.

"You like my new room," he smiled, sensitive as ever to other people's moods. "But it is really very simple. The rug is a red Bokhara which my father bought from a caravan. This furniture—does it look good? You would not believe, would you, that it was all made right here, by my Hunzas?"

I agreed that anyone would suppose that the furniture had been imported, factory-made, and asked him what wood had been used.

"My chief carpenter worked in Gilgit under the British," he replied, "and learned all these things. The wood is apricot, and the soft cushions are full of wool. You see, my Hunzas know how to make things of the materials at hand. Will you have tea with us?"

"Yes, thank you." (I didn't mention that his was the only house in Hunza which had real furniture.) Ayash turned to a rear doorway, and spoke a single, low word. The Mir's servant must have been waiting with the tea tray, because the next instant he was in the room setting it on the low stand before the Mir.

We performed the comfortable rituals with lemon, cream, and biscuits, and the Mir relaxed in his armchair.

"Now tell me all about it," he said. "Did you have trouble in Gilgit?"

"Not much, once I reached there," I replied, "but in Karachi, I thought permission to come would never be granted."

"But I approved of your coming!" he barked, and his face grew flint-hard, his powerful, aristocratic nose strong as an eagle's beak. "If Karachi has no objection for international reasons, and I approve of you, what business is it of some child of evil in Gilgit? I am still the King of Hunza!"

"Some men have no respect," purred Ayash Khan, his voice very soft for such a bulky man. "It is not you alone, Clark Sahib, whom they disrespect. Last time I was in Gilgit I agreed to repair a certain official's radio, as a favor to him. When I went to his house, he was giving a party." Ayash's hands and face remained relaxed, but his dark eyes shone with anger. "'*Idarao!*' they said to me, '*Repair karo!*' (come in and make repairs!) Servants' words to me, a prince of Hunza."

"What did you do?"

"I went in and fixed the radio they were too stupid to repair for themselves. When I went out, I made deep salaams," his voice swelled and faded like the gentle buzz of a menacing rattlesnake. "Every day I remember this insult."

As I looked at the haughty, angry Mir and at Ayash, so dangerously quiet, I was grateful that these two were friendly toward me.

"Mir Sahib," I said, anxious to change the subject, "I want to set up my household, then open a dispensary. It is too late to plant my vegetable seeds this year—"

"Oh, you brought seeds, too!" The Mir was very happy, all his anger forgotten. "My people are farmers, as you know, John; and I am a farmer too. Why don't you just settle in the guest house permanently? My cooks can feed you, and there will be no trouble."

This was the last thing I wanted to do. The people of Hunza would always regard me as an outsider if I remained the Mir's guest.

"Thank you, Mir Sahib, but I believe that may be unwise. When my dispensary is opened, patients will be coming day and night. You wouldn't want them tramping under your windows, waking you. Besides, they would ruin your flowers. Also, I couldn't set up a woodcarving factory in the guest house. If it isn't inconvenient, I think the old castle will suit me perfectly."

"As you wish, John, of course. But," hesitantly, "it isn't really fixed up. If you don't mind that, you're welcome. One apartment will be enough for you, I think; the old queen has been living in the other for many years, and I would not wish to move her."

"Of course, one apartment is ample! But mightn't I disturb the dowager queen?"

"Oh no, not at all. She never goes out, so the two of you will almost never see each other. We'll attend to it all tomorrow."

As we spoke, the curtain over the rear door swayed aside, and a slender little gray-eyed boy walked in, very straight but very bashfully. His pale skin was accentuated by the black stain on his eyelashes and

the English schoolboy clothes he wore. This was Ghazanfar Ali Khan, nicknamed Bapu, the nine-year-old Crown Prince of Hunza. He smiled at his father, shook hands with me, and shyly breathed, "*Salaam alaikum, Sahib*," then hurried over to his uncle Ayash. He leaned comfortably against Ayash, who smiled at him very fondly and patted him gently.

"I have something for you," I told the Crown Prince in Urdu (he was just learning English), and held out a package I had brought. His eyes sought his father's; the Mir nodded permission, and Ayash muttered in his ear, "Go ahead, Bapu, it's all right." He took it very hesitantly, and opened it. There were balloons, chocolate candy, and a set of plastic toys. After I showed him how to blow up a balloon he slipped out again, no doubt to demonstrate these treasures to his three sisters and his small brother, Amin Khan.

"I wish I could speak to him in your own Brushuski language," I told the Mir, "but Americans are usually poor at languages, and I'm no exception. Urdu is the best I can do. How many languages do you speak?"

"You do very well in Urdu," he smiled. "But here we must be fluent in several languages. I know six, and Ayash speaks nine very well!"

Ayash blushed sensitively with pride. I knew that, all alone in these mountains, he had taught himself accounting, telephone and radio repair, and some motor mechanics. A proud, intelligent, lonely man, who was really happy only when he was playing with the Mir's children; against the rest of the world he maintained a wall of distrust.

The two of them were a study in contrasts. The Mir, happy with his family and content with the honors and comforts of his rank, was intelligent and sensitive, too, but quite an extrovert. He had a battery radio set with which he tuned in on the Voice of America broadcast from Manila every afternoon. He enjoyed the deep satisfactions of a gentleman-squire's life in Hunza, while outside the world filled itself with sound and fury.

I excused myself as soon as tea was finished, and hurried back to the guest house. Haibatullah and I spent the evening unpacking the things we had brought for the Mir and his family. He had ordered some pipes, a pair of binoculars, a good cigarette case, and a string of pearls for his Rani. I had also brought him a fine rifle, a Winchester "star-gauge" 30-06 with a Lyman 'scope sight, and a set of large colored prints from pictures I had taken of him last year. My mother had sent a vanity set to his Rani, and I had brought an Erector set for little Bapu and some

plastic gadgets for the smaller children. I had also brought a leather pocket case of fine electrician's tools for Ayash Khan. Digging these out of the various lockers took a couple of hours. When we had them all, Haibatullah and I went to bed, our slumber aided by a good supper, the dry cool Hunza air, and the weariness of three hard days on the trail.

Next morning was like Christmas for the royal family. The Mir and Ayash never lost their dignity, but they glowed with obvious pleasure over each new package. I couldn't see the Rani personally, of course, because this was a Muslim family, but the Mir's face was one broad smile when he returned from delivering the pearls and vanity case to her. Bapu watched with deep interest while I showed him how to use his Erector set, then took it firmly out of the living-room.

Then the Mir turned to me. "John," he said, "as you very well know, it is hard to buy food in Hunza. You will need flour, meat, and wood, and many other things from time to time. Most of my people have very little and cannot sell to you much, no matter how much you would pay. I suggest that you tell me of your needs and I will supply them."

"Thank you, Mir Sahib," I said, "that will solve my most serious problem here." Actually I didn't wish to be so dependent upon him, but what he said was true, and as there were no shops of any description, I had little choice.

"Likewise," he continued, "I will from time to time want things from America, which you can order for me by mail. It will be an arrangement of each helping the other, like brothers."

"True," I replied cautiously, "and how often would it be convenient for you to have a balancing of accounts?"

"Between brothers there should be no foolish checking. You keep a rough list of what you supply to me, and Ayash will keep an accounting of what we supply to you. When you are ready to leave for America we will compare them. But I am a king and you are a man of importance—let there be no silly haggling or one-rupee and five-rupee accounting! We shall record major items only."

"Very well, Mir Sahib, it's an agreement."

I didn't like it at all, because business agreements should be careful and specific, especially between friends. But what can one say to a king in his own country? Later, this agreement was to be a source of serious trouble.

The Mir and Ayash personally escorted me to the old castle. We walked back up the shady trail we had ridden yesterday as far as Baltit

village. Then we turned straight north, past the little open space in front of the prayer house. About twenty tall lean men in dusty cotton clothes, who were sitting on boulders, sprang up, saluted us, and bowed low as we passed. The lane of cobbled boulders and glittering mica sand climbed steeply, then made a sudden turn to the right. Still climbing, but in the open sunshine now, we made two more switch-backs. We came up a broad trail of rock steps to a doorway set in an adobe wall. The castle chowkidar, an upstanding old man with an expression of complete rascality, was holding the door open for us as we stepped into the small, bare yard. Hanging over our heads was my castle.

Overlooking us was the sheer, blank west wall, its thick coat of whitewash flaking off in places. The main building was two stories high with a smaller third story set about in the middle. On the left, a large, semicircular bay window teetered precariously on weather-blackened poles. In all this vast pile there was only one narrow door, with a set of rough-hewn marble steps leading to it.

As we went through the door, the Mir pointed up. "Look," he grinned, "my ancestors were prepared for unwelcome guests!" There in the gloom over our heads was a platform, with niches set in the walls. Here, when the castle was a fort, defenders could hide.

"Boulders and boiling water," murmured Ayash dreamily, "could make an enemy wish he hadn't come in this door."

We climbed a set of rickety old stairs, passed several passages that led off into black darkness, and reached a landing on the second story. Here the sunlight streamed in from above, through the opening where the short upper stairway emerged on the roof. The banisters were weatherstained wooden poles, polished by generations of hands until they shone like glass. The Mir smiled when he saw me run my hand over them.

"Yes," he said, "this castle is very old—about six hundred years. Look at those walls: do you see why this castle stands through earthquakes and storms?"

Their strength was evident. There was actually an outer and inner wall of logs, with a space between. At the corners, every log was fastened to those above and below it by stout wooden pegs, hand-fitted into deep holes. The space between had been filled with rocks and mud, and a whitewashed adobe plaster covered the outer faces. The whole structure could sway and bend like a reed in a stream, without any damage, except that a little plaster might crack off.

We climbed the upper stairway to the castle roof, with the rascally

old watchman trailing behind us, and blinked in the sudden brilliant sunshine. Our eyes were caught first by the blinding white of Rakaposhi Peak, gleaming clear against the sky thirty miles away. Then we looked down over the low parapet, across the terraced barley fields of Hyderabad to the rooftops of Baltit below us, nestled among dark green orchards. I could see my neighbors turning little sheaves of hay, drying them on the roofs.

This was to be my front yard, my "picture window."

But the Mir and Ayash were waiting, and I turned to follow them. We faced a one-story superstructure that rose above the roof like a ship's bridge, topped by a sharp-pointed wooden steeple. We entered a tiny dark passage with two doors, one before us and another to our right.

"The door to the side leads to the old Rani's quarters," Ayash said gently. "Your two households must use this same entrance, but there will be no trouble, I think."

"Certainly not!" I assured him. Even though the Rani was an old woman, and I was not young, this was still a country with rigid ideas of propriety. I knew the Mir and Ayash were delicately hinting that I should be circumspect.

The Mir led us through the center door into a large room, once the reception hall of his grandfather, Mir Nazim Khan. A gentle, tomb-like illumination filtered through dusty window-slots in the steeple overhead. The tan mud walls were inset with cabinets of darkened wood. A frieze of small, round shields, some beautifully inlaid brass and others of gaudily enameled wood, glimmered through the unshadowed dimness. Silence, decrepitude, and thin, fine dust made us interlopers to the grave of things long dead.

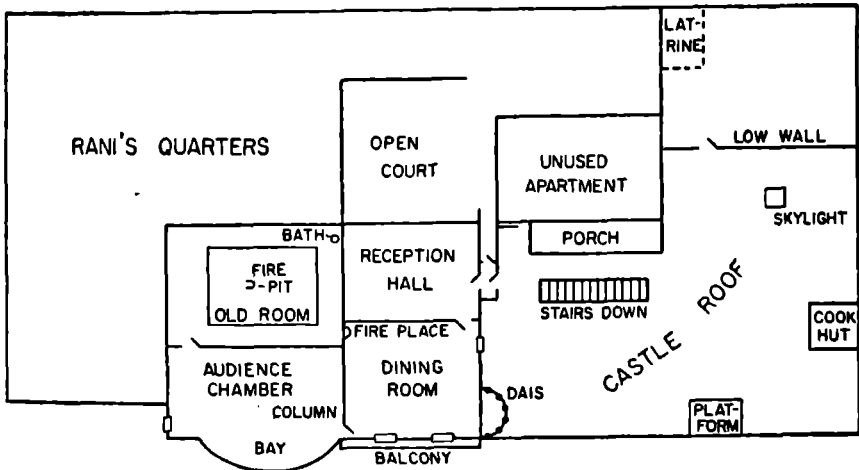
"Here can be your storeroom." The Mir's practical voice broke the illusion. "I want you to understand, John, that these were my family's own quarters; even though I have built my new palace, the people of Hunza think of this castle and this apartment as the heart of Hunza. It is a big thing that you should live in it."

So that was why he had been hesitant before! To me, of course, the castle was the only suitable space available, but to these people control of the castle meant control of Hunza. How typically Asian that the Mir had never mentioned it until now, I thought, as we stepped into the second room.

Here was utilitarian ugliness with neither past nor dignity. The room was square, dull, and dingy. On the floor were goat-hair pads covered by cheap, brightly dyed cotton mats from Kashgar. The ceiling

boasted a large chandelier with glass bangles. A rickety round table and single upright chair beside the mud fireplace made me decide that this would be our dining room. A wall poster at least three feet long displayed an elegant picture of Queen Victoria, and the statement that Mellen's Baby Food was untouched by human hands.

OLD CASTLE, THIRD FLOOR



- 1 THE SKYLIGHT MARKS THE MIDDLE OF THE SCHOOL ROOM ON THE FLOOR BELOW.
2. EXCEPT IN WINTER, HAYAT AND BEG SLEPT ON THE DAIS, THE OTHERS ON THE PORCH, AND I ON THE PLATFORM.

We passed through another door into the old audience chamber. This room was as bare as the last, but two fine Khotan rugs on the floor, a central wooden column supporting the ceiling, and bright light from the bay window which formed most of the west wall gave it an air of graciousness and freedom. A kitchen table and chair stood in one corner. Pictures of the Agha Khan and his family decorated the north wall, and for some unexplained reason a large blue Christmas-tree ball hung from the central column. It was only on second inspection that I noticed that the outside of the room sagged, that the walls were streaked from the leaking roof, and that the rugs were faded.

"This can be your office," said the Mir expansively. "I should prefer that you and your household do not live in it too much, or the fine things may be spoiled."

I assured him it would do very well as an office and we would be

very careful, thinking meanwhile how utterly Asian it was to build a fine thing, abstain from using it lest it be damaged, but never lift a finger to maintain it. I have seen many an Asian structure reach an advanced state of dilapidation before its construction is completed.

"This last room," the Mir said as he led us through a final door, "was the real living quarters of our family, when I was young. It is old-style Hunza, but there's a drain in the corner where you can bathe. It's the warmest room of all, and you may want to sleep in here during the winter."

It was indeed old-style Hunza. A row of wooden uprights paralleled the four walls, separating a sort of raised peripheral gallery from the main central area. Light from a three-foot-square hole in the roof illuminated the center of the room; there were no windows. Almost directly below the roof-hole was a small fire-pit. Two battered wooden chests occupied corners of the gallery, and several rectangular recesses cut in the earthen walls could serve as what-nots for my shaving kit and other gadgets. Baths would, obviously, be of the sponge variety, from a pail and basin. I couldn't help speculating just how warm any room would be with a great hole in the roof letting in all outdoors, but I was to learn much in the next few months.

Although not luxurious, this was a good headquarters and a convenient base camp. As we walked back out from room to room, I was already visualizing my typewriter and books in the audience chamber, my footlockers in a row along the dining room walls, and my sacks of flour, rice, sugar and other bulk supplies in the beautiful old armory.

The Mir completed arrangements as we stepped out again onto the castle roof. "I'll have my men build you a small cook hut over there," he said, pointing to the south edge of the roof, "and you can use this place for a W.C." (He knew only the British euphemism for a latrine.) He led me to a secluded corner of the roof, where a hole functioned as a slit-trench into a closet on the floor below. "My servant, Mubarek, will come and clean this out periodically. Oh, yes—" he hesitated a little, a cue which I came to recognize later as an invariable sign that something was going to cost me money—"and old Nasar, there, is the regular castle chowkidar. He will continue in his present capacity for me, of course, but if you would care to pay him a small sum each month, he would be very pleased."

"Certainly, certainly!" I needed a chowkidar as much as I needed fleas, but the Mir evidently wanted it that way, and Nasar was in a

position to cause me a great deal of minor annoyance if I refused. "I'll pay him fifteen rupees per month—will that be adequate?"

"Oh, yes, entirely so." The Mir turned to Nasar who had been watching us, his leathery face beaming hope and cupidity. In swift Brushuski he told the old devil of the bargain, and Nasar bent swiftly and kissed my hand with exaggerated gratitude.

Haibatullah and I held a conference that evening in our guest quarters. His knowledge of Asian custom and ways was tremendously useful to me. Best of all, he had the ability, rare in Asians, to omit flattery and give me his honest opinions. Our problem was that we now had two headquarters—one in Gilgit and one in Baltit, and I had to decide on the proper distribution of my equipment and time between them.

Haibatullah considered carefully. "The decision is yours, Sahib," he said courteously, "but I think you should maintain your headquarters at Gilgit and do a little work there, to keep people from saying that you are spending all your time in Hunza and therefore must have political motives. But if most of your work is to be in Hunza, then your main headquarters must be here."

I agreed that this was a sound idea. (I was often to recall this conversation as I traveled again and again over the rugged trail to Gilgit.)

"Yes, but—" he said a little anxiously—"If we do this, how am I to help you? My Urdu isn't too good, and most of these people speak only Brushuski or Bericho. Furthermore, you know that Hunzas dislike Turks, ever since the Hunza-Turki wars eighty years ago! They certainly haven't been friendly to me so far."

"Don't worry, Haibatullah. You can keep accounts and superintend my headquarters, and Beg and Hayat can do the necessary buying."

If the castle was to be our main headquarters we would need many of the things I had left at Gilgit. I gave Haibatullah two hundred rupees with which to hire pack horses, and told him to ride to Gilgit and bring up the equipment. I read off in Urdu a list I had written in English, and he wrote down a list of his own in Uzbek. By this time I was so accustomed to polylingual operations that this did not seem at all complicated.

Next morning was a really busy one. Haibatullah left early for Gilgit, riding on Rani. Beg and Hayat rounded up three men to carry our luggage from the new palace up the rocky lane to my headquarters. Hayat was stationed at the old castle, to show the porters where to put things, and I stayed at the palace to help Beg check our baggage out.

The porters wrapped each locker with black horsehair rope in a complicated hitch, shouldered the eighty-pound load without a grunt, and walked off easily. It was funny to watch how cleverly Beg contrived to superintend without actually lifting a box. As a boy of good family, he could not be seen doing coolie work, which was only for low-class people. The whole fourteen boxes were moved before lunch time, with everything intact. I gave each porter a rupee, whereat they made deep salaams and departed, but I noticed Hayat frowning.

"Trouble, friend?" I asked.

"Sahib, they expected four annas, and would have been very grateful for eight. But a whole rupee for just a morning's work—now everyone will hear about it and they'll think you're foolish."

Beg nodded assent. It was the first of many mistakes I was to make. My mind was still Western-oriented, and I couldn't imagine a man carrying five eighty-pound loads half a mile up a five-hundred-foot hill and three flights of stairs for less than thirty cents.

We spent the afternoon unpacking and arranging things in our new home. It was fun moving in, trying to figure where each thing would be most useful. The books, obviously, went into the office; but would ammunition be handiest with photographic supply or with carpenters' tools? By careful planning we emptied four footlockers, so each of us could have one for his personal clothing and belongings.

We had bought two maunds (160 pounds) of whole-wheat flour from the Mir, and eggs from a relative of Hayat's. I had brought several pounds of tea from Karachi, and a maund of sugar (at forty cents a pound) from Gilgit. Nasar, the chowkidar, would sell us a little sheep milk every day. In a country with very little reserve food, I would live better than average, but at a high cost in money and in effort. The worst daily nuisance was the wheat flour, which contained a little sand, cow and donkey hairs, and sometimes bits of manure. The copper screening which I had brought for use as a sieve unfortunately had been stolen in Gilgit. For the whole two years of my stay, I was to enjoy my whole-wheat *chapatis* real Hunza-style, filled with occasional unpleasant surprises.

Our most important problem was the medical dispensary. It would be inconvenient to have sick people traipsing through my apartment, and the Mir had objected to this arrangement, anyway. We finally selected a room I hadn't seen before, on the floor below my living quarters. It was old-style Hunza, with a skylight, earthen floor, a central space and surrounding gallery, and it opened directly off the stair landing. Fortu-

nately the skylight was large and the room fairly light. We put two footlockers of medicine down there, and filled an old wooden cabinet with instruments and additional supplies, spread a heavy rubber sheet on the earth floor for a diagnosing and operating "table," and were ready for business. Our water supply consisted of buckets and jerry-cans dipped from the nearest irrigation ditch by Mubarek, our new clean-up man. The water was ice cold, silvery-gray with fine ground mica and rock dust, and relatively sanitary. With a little potassium permanganate added, it would be clean enough for antiseptic washes. The main trouble was that instruments boiled in the water were invariably covered by a thin scum of rock dust. This could be brushed off scalpels and tweezers with a sanitary brush, but sutures and syringe needles were difficult to clean. The sandy water from the ditches was actually almost sterile, coming as it did from a melting glacier. The Hunzas let it settle, for drinking purposes, in small cisterns, but these were so polluted that I preferred the sand.

That night, our first in the old castle, the Mir very kindly sent me a full supper, well-wrapped and hot. (Our little adobe cook shack was being built, but not yet ready for use.) Beg and Hayat made whole wheat chapatis at the fireplace in our dining room. I seated myself at the rickety table, and they promptly started to eat on the floor before the fire.

"Here," I said, "come up and eat at the table with me."

"No Sahib, it's really more comfortable on the floor," Sherin Beg answered politely.

"What you mean is that in Hunza it isn't proper for you to sit at the table with me," I shot back.

"Anyway, there's only one chair!" Hayat defended, while Beg hung his head.

"Get the one out of the office, and pull over that empty footlocker for a stool," I ordered. "This is my house and inside it things will be done American style!"

Actually, it was vitally important that I win this first battle with tribal custom. The boys could not learn resourcefulness and initiative while they felt and acted like servants. In a few minutes they were seated at the table. Both of them were very neat about their food, but Hayat always sat rigidly erect while Beg ate turtlewise. We divided the Mir's contribution and the chapatis, and for a special celebration we opened a can of chocolate syrup.

Beg cared little for chocolate, but Hayat loved it, and he anxiously

watched the can making the round of the table. As he handed it to me for the second time, he grinned suddenly.

"Sahib," he chuckled, "you are my father and my friend, but when there's only one small can of chocolate I wish you were somewhere else!"

This was wonderful. Honesty and the ability to laugh at oneself were qualities on which one could build a leader.

That night we selected our bed-places. I laid a felt pad on a little wooden platform out on the roof (I never did learn what that platform was for), and my bedroll on it. Beg and Hayat placed their bedrolls, complete with air mattresses (damn it!) on a small dais, surrounded by thin wooden columns. Here ancient kings of Hunza had held outdoor court. The chowkidar, Nasar, his eight-year-old grandson, and the cleaning man, Mubarek, slept in a row under a narrow roof near the stairs. My bedroom certainly did not suffer from too much privacy.

The night was beautiful, with a cool breeze to fan us and the great peaks, black against the starlit sky, guarding us like mastiffs.

I wakened quite suddenly in the light of full dawn, and glanced over at the dais. Hayat was slumbering blissfully in his new bedroll, but Sherin Beg was awake, quietly watching me, his eyes gleaming with gentle mischief. I looked where he did—and jumped. There, not ten feet away, was a whole row of people, men, children, and one old woman, all dressed in the usual grey-white cotton, all watching me—the first patients for my dispensary. A hasty call brought old Nasar out of bed fully clothed, and he shooed them downstairs so that I could dress with a little privacy. Sleeping before an audience is an unreasonable and definite shock to one's modesty.

Beg roused Hayat and, while they were dressing and cooking breakfast, I went below and opened the hospital room for my patients. All eight of them immediately crowded in, quietly but firmly, the adults elbowing the children out of their way. I explained to Nasar that I'd take them one at a time and he was to get them outside on the stairs. They agreed, but no one moved toward the door.

"Ask who came first," I told Nasar. (He understood my Urdu.) Immediately there was a wild babble of Brushuski. They had all come first! Finally I lined them up arbitrarily and told Nasar to admit them one at a time. No sooner had everything been arranged than Sherin Beg called through the skylight that breakfast was ready.

Face required that I do not delay my meal for a mere patient, so I got them all to sit down and departed.

By the time we gulped a hurried breakfast, four more people had

arrived. Except for the dirty-white cotton clothes and bare feet, my patients looked about like the usual people to be found in an American doctor's waiting room. Their diseases, though, were quite different. Madut had chronic dysentery; Hobi had malaria (what sadistic fiend ever labeled this malaria "benign"?); the old lady had sore eyes. With smoke in her eyes every meal time of her life, it wasn't surprising. Several people had stomach aches. I gave them milk of magnesia tablets and instructions to come back if the pills did not relieve them. Two or three more patients showed up, but it wasn't too busy a morning. I asked Beg and old Nasar to announce that the hospital would be open every morning, but never in the afternoon; there were many other things to do, and I was optimistic enough to believe that I could make Hunza conform to a schedule.

That first afternoon, Hayat, Beg, and I had a special project. We first went to the Agha Khan's Middle School in Baltit. This corresponded roughly to an American junior high school, and was the most advanced of the schools which the Agha Khan supported for his Central Asian flock. Babu Jan, the headmaster, met us very courteously. He was a tall, austere, flint-faced man, a distant relative of Hayat's, greatly respected throughout Hunza. He introduced me to the other two masters, and called his twenty-six boys to a rigid salute as I entered with Hayat and Beg behind me. There was a little flutter of nervous anticipation, more a feeling than a sound, when they sighted us. Everyone in Baltit knew that a big package of real pencils and paper had come by mail from America, and maybe—maybe—the American Sahib would give them to the schoolboys!

Actually, the eighth-grade boys of a Methodist church in Glen Ellyn, Illinois, had sent a shipment of 450 pencils and 310 paper tablets as a gift to the schoolboys of Hunza. Thieves had opened the parcel en route, but I still had 307 pencils and 280 tablets.

I counted out one pencil and four sheets of paper for each boy, and Hayat and Beg passed them around. I explained to the school that these were the gift of American boys their own age. The youngest schoolmaster respectfully put the question the boys were too bashful to ask; "In America, does every schoolboy have all the pencils and paper he needs?"

I told them that American schoolboys were well supplied, and only too happy to share with their Hunza friends.

Then I looked at their slates. Each boy had a piece of brown, polished apricot wood about a foot long and ten inches wide, on which he wrote with a stick dipped in lime water. As soon as a lesson was graded,

it was wiped off the slate and a new one begun. There weren't enough textbooks to go around, so the boys had no way of reviewing what they learned. They studied by memorizing, and they all studied out loud, which turned the schoolroom into a droning bedlam by comparison with which a newspaper office is a monastic cell. It was training, and better than nothing, but it certainly wasn't creative education. The American gift would make them want more books and paper, and once they felt this need perhaps they would find ways to satisfy it.

The school gave three rousing cheers in my honor and we took our leave. A short way down the slope was the primary school, where we were greeted by a swarm of barefoot kids, from grinning little six-year-old imps to growing boys of ten and eleven. (No one ever considered educating girls. Schools for boys was still a new idea, and less than one out of every ten attended.) There were black-haired fellows, brown-haired ones, blonds, and even an occasional redhead. All of them were very respectful and all of them were thin. They had been told to stand in double ranks to receive their pencils and paper, but their lines broke toward us like waves on a beach as wild excitement pushed them forward and discipline held them back.

Our final visit was to the school in Altit village. This involved climbing up three hundred feet, down five hundred, back up three hundred, and then walking a mile. By the time we reached the schoolhouse, most of the town had gathered to watch. The school was a one-story wood-and-adobe building with a wide veranda, and here the boys were sitting crosslegged in two rooms. The room inside was windowless and too dark for reading, so the boys studied outside. Lazy butterflies passed unheeded among them, and a slight breeze rippled the leafy shade. If school must be held on a warm June day, this was the place to hold it. (When winter came I was to see them sit shivering in this same spot in the freezing wind.)

After introductions, Hayat and I walked down the line giving each boy his pencil and paper. This was Hayat's own school, and these were his classmates, but one would never have known it from their actions. At fourteen, dignity is a matter of some importance.

By the time we returned to the castle the sun was low. Sherin Beg prepared supper while Hayat fed Bili, who was stabled in a building at the foot of the castle steps. I wrote in the diary which I was keeping as an official record for my Foundation, then started to bring my financial accounts up to date. Already I was learning that the big jobs were not too much for me, but in order to do them I had to omit the multitude of

small chores that are necessities of daily life—sewing on buttons, buying firewood, deciding where we would put the typewriter, all the things a wife would do in a home where a wife was possible.

For us there was no evening. Evening belongs to city people who work indoors, who have lamps or electricity to hold back the darkness. Those who work outdoors all day, and must make one candle last three nights, are glad to go to bed when it is dark.

CHAPTER IV

The Healthy Hunzas Come to the Doctor

NEWS of the morning dispensary had raced across the Hunza oasis, and I awoke to find myself snoring to an interested group of thirty-two. Nasar informed them clearly (Brushuski is a blunt language) that they were to stay below, out of my "bedroom." I dressed in haste, ran downstairs, and opened up the dispensary. Again they all crowded in, and again Nasar shoved them out. The trouble was that he himself became so interested in this doctor business that he kept forgetting his job, and the patients would slip in by twos and threes until the place was so jammed I couldn't see or hear. (Actually these people weren't rude; they were just untrained. By the end of a month they had all learned what I wanted, and were cooperating beautifully.)

In mid-morning, a lean, dark man entered carrying a little boy very tenderly in his arms.

"He has sores, Sahib," Sherin Beg translated to me.

"Put him here," I motioned toward the rubber blanket on the floor. As the man laid him down, the child shrieked in agony.

"Is this his father?"

"No, Sahib, his uncle. This boy is an orphan."

"Well, why in the name of Almighty God has the child not been fed? How old is he—six?"

A hasty conference in Brushuski, and Beg turned to me again.

"No Sahib, he's ten. He has been fed, but for two years the sores have been growing worse, and for many days now he has not wanted to eat."

Very gently his uncle and I pulled the dirty little cotton shirt off over his head, loosened the drawstring that held up his pants and took them off. All that was left of that little boy weighed less than forty pounds. The two separate bones of his forearm showed clearly, with a groove between. His abdomen was a deep hollow, notched up between his ribs. All over his emaciated brown arms and legs were the sores that were draining his life away—ugly, black crusts over raw, suppurating flesh. Both elbows were completely covered; three-inch scabs spotted

his legs like macabre spangles. Blood and yellow pus oozed from the sores around his shoulders, where we had hurt him taking off his shirt. His eyes were running tears of pain, but somehow he gathered strength to smile at me.

Very gently I covered the sores on one arm with cotton soaked in potassium permanganate solution. As fast as one dried I replaced it with another. Beg went up to our storehouse for a cupful of sugar, and Hayat counted out twenty vitamin pills for me.

"One pill every day," I told the uncle, "and a spoonful of this sugar five times a day. He'll eat that, I'm sure." I tried him with the sugar and he did eat it, with pleased surprise. He had never tasted sugar before.

In half an hour the scabs were softened and I mopped them off down to the raw flesh beneath, while the child moaned and gritted his teeth. Then I sprinkled the sores with a powder of mixed penicillin, sulfathiazole, and boric acid, and bandaged them loosely. He needed the treatment all over, of course, but I dared not risk too much pain in his condition; already his face was pale and his heart was acting queerly. I didn't even dare give him sulfa by mouth or penicillin intramuscularly—a slight sensitivity would have killed him. His uncle promised to bring him back next day, and off they went.

Forty-five minutes spent on one little boy, and thirty-odd other patients to treat before noon! Fortunately, most of them had malaria, dysentery, worms, trachoma, and other things easily diagnosed and quickly treated. It was at this time that I started a regular record system for each patient, with slips of paper doing duty for the card file I had forgotten to bring from America. It would be most embarrassing to have a patient ask for some of those good white pills you gave him two months ago, if you had no record of what they were.

As soon as the last patient left, we snatched a hasty lunch and cleaned our whole house. Today, June 29, was Genani, the barley-harvest festival, and since the main ceremony would be in our castle, we had to prepare for it. Hunza cannot produce enough food to last the year, so a partial famine develops every spring. No one starves to death, but everyone goes hungry. Barley is the first crop to mature in the spring. The barley harvest breaks the famine in Hunza, so it is an occasion for real rejoicing. Most of the Hunzas would eat barley-flour chapatis from now until wheat harvest early in October. Only the Mir and a few well-to-do families had sufficient wheat to last the year.

We put on our best clothes. The boys wore their new G.I. suntans, and I had a new pair of blue jeans and a woolen shirt with a colorful

Armored Force patch from my Army days. The boys had removed their beds from the roof, and the Mir's chief bodyguard draped the dais with three beautiful red Bokharas and a special purple rug edged with gold brocade.

At 3 o'clock, five thin, quiet fellows in rumpled cotton trousers, bright shirts, and shabby English-style coats filed in and sat on my bed-platform. This was the Hunza State Band. One of them produced a pair of kettle drums which he tuned carefully, two had wooden flutes, one a straight wooden horn that emitted calf-like notes, and one had a sitar (Asian guitar). They practiced intermittently for two hours. In a Western setting it would have been awful, but here on the castle roof the odd rhythms and weird tones were just right.

At 5 o'clock, the royal party, fully mounted, left Karimabad Palace for the half-mile ride up to Baltit Castle. The boys and I and several lumbarbars* went down to the castle courtyard to greet them. The Mir is magnificent at such times—just the right balance of dignity and friendliness, without a bit of self-consciousness or stage-play. He and his son Bapu and I walked together up the steps, the Mir wearing his black state robe with gold embroidery, and Bapu in white jodhpurs, green jacket, and great white turban. Ayash followed just behind, and after him came sixteen village chiefs, led by the old Wazir. Three plainly dressed men stood at the entrance of the castle proper. The first offered us a silver platter of chapatis, butter, and milk, from which we took a token nibble to show that we had accepted the hospitality of the house. The second sprinkled a liberal pinch of flour on each man's head and right shoulder. The third had a platter of coals, and he gently blew the smoke into our faces as we entered, to drive away evil spirits.

Custom required that young Bapu ride to the Mir's barley field, attended by Ayub the seneschal on foot, cut a sheaf of barley, and bring it back to the Mir. He must do this slowly, because the whole way was lined with people praying for a successful harvest as he passed. The Mir, the old Wazir, and I went to the ancient audience chamber (my office now) to wait while Ayash vanished silently to superintend preparations for the rest of the ceremony.

Meanwhile Hayat and Beg had quietly mingled with the crowd of men and boys who by now had packed the castle roof. We could hear the buzz of their voices as we sat waiting.

After half an hour Bapu returned, bringing with him a small sheaf

* This is the Urdu word; here they were called *trang-pa*, and among the Wakhi of northern Hunza, *arbop*.

of barley which the Mir inspected and pronounced good. The sheaf was then tied to the center pillar of the audience chamber, to bring prosperity to Hunza fields in the coming year. It hung over a fine Bokhara rug and my Underwood typewriter.

We then went out on the roof to the dais, the crowd respectfully making way for us. The Mir and I sat on the purple rug, with Bapu and Ayash on chairs beside us. The lumbarbars sat comfortably facing us, their backs resting against the low parapet that bounded the roof. They and the Mir talked to each other with the deference and freedom of men who have worked together and shared their varying loads of responsibility for a long time. All around, the close-packed men and boys listened attentively.

After several minutes, three men appeared. The first bore a great silver tray with a large spoon and a wooden bowl of milk. As each of us in turn dipped and drank three spoonfulls, the second man scattered grains of green, soft barley into the milk from a sheaf he was carrying. These two then served the Wazir and the lumbarbars, while the third offered us a delicious meal—thin, moist chapatis spread with sour cottage cheese, rice with chicken, and a very mild mutton curry. As soon as we had started to eat, a whole row of servingmen brought out food to everyone on the roof. This was the traditional feast, with the Mir playing host to all who could crowd into his house. Then a young mullah led us in a short prayer, and the formal observance of Genani was over.

It is a very old ceremony, much older than Islam. First the prince gathers the harvest, then the king, as father of his family and his people, blesses it, and there is a feast and prayer of thanksgiving. To these people it was not a ceremony, it was rather a formalized reality, and they performed it with sincerity which no ceremony could ever achieve.

On my fourth morning in Hunza we faced sixty-two patients, the most I ever had in one day. They came chiefly from Baltit and Altit, but some were from Hasanabad, five miles west, and one family had walked all the way from Ghumessar, twelve miles east. Beg and Hayat worked right at my side. Both of them were fastidious about touching oozing sores, but cleansing of ringworm and impetigo sores was the only time-consuming job they could do for me. One boy would be soaking the gooey mess off the face of an impetiginous baby with potassium permanganate, while the other translated for me with the next patient. Beg was much more distressed than Hayat, both by revulsion at the sores and by horror at the pain he was causing. Twice I heard him mutter, "I'm

sick myself!" but he went on. We developed our own medical vocabulary. Iodine was "Iodeen," merthiolate was *Shaitan'ka dawai*—"devil's medicine"—and magnesia tablets were *pet dawai*—stomach medicine.

In mid-morning, the little boy with the sores came riding on his uncle's back. He felt better, but he was still in considerable pain. The arm I had treated was almost well. (May God bless the men who discovered sulfa drugs, and the distributors who kept the price low enough so I could afford to bring them.) The little fellow was still so weak that I didn't dare treat the sores on his legs, but I did clean up the other arm and risked giving him sulfadiazine by mouth. He sat naked before me, with tears of pain again dropping from his cheeks, and helped me soak off the scabs so that the sulfathiazole could penetrate. What magnificent patients these people were! Never a coward, never a neurotic among them.

We finished our medical work at 2 o'clock. The boys fixed lunch while I cleaned up the dispensary. We had plenty of things to do, but the afternoon was half spent by the time we had eaten, and then I was too tired for anything but thought. My problem now was to analyze the medical situation, and figure a way of keeping the dispensary from occupying too much time.

Medical work met a greatly felt need, but it didn't serve my basic purpose of helping the Hunza people to help themselves. I had somehow to find time to run a geologic survey, start experimental gardens, and organize a woodcarving school. Most time-consuming of all, I must win people's confidence so they would discuss things with me voluntarily. How to do this in the face of the agonizing personal needs of sick people was the problem. If only there were a doctor to relieve me of the burden of the dispensary!

I knew that some years ago the British maintained a doctor in the dispensary at Aliabad, five miles from here. However, the tragic shortage of doctors in Pakistan had compelled the Pakistan government to drop that post. The Aliabad dispensary was operated by a compounder, a local Gilgit man with a few years' experience mixing prescriptions for a British doctor. He knew nothing about diagnosis, of course; his medicine supply consisted of bulk remedies years out of date, and the most useful ones usually out of stock. The Agency surgeon, Dr. Mujrad Din, at Gilgit, sixty-eight miles away, was the nearest doctor. In former times the British Agency surgeon covered this whole area on horseback once a year. Dr. Din had toured once as far as Baltit, and since then had left Hunza completely alone.

My own training consisted of a minor in anatomy, a year's college course in first-aid and public health, and some very practical information from doctors of Billings Hospital in Chicago, Johns Hopkins in Baltimore and the United Mission Medical Council. As a field geologist, I had twenty years' experience at first-aid. Also, I had been a partial invalid as a small boy, and learned a good deal at first hand from our family doctor. To Hunza I brought Cutting's *Manual of Therapeutics*, the *Merck Manual*, Gardiner's *Handbook of Skin Diseases* and the fine, practical papers of the Medical Council. Best of all, I had the wonderful modern medicines, sulfas, penicillin, paludrine, atabrine, undecylinic acid, and others. In the United States I had arranged whenever possible to have the medicines put up as pills or ointments, which could be given to the patients wrapped in a piece of paper. Powders were next best, and liquids least desirable of all, because for liquids the patients must supply a bottle and in Hunza a cracked, filthy bottle cost about twenty cents.

Of course, a real doctor could have done much more than I did. However, these people had been without any medical attention for three years. Most of their ailments were common things fully developed before they bothered to come to me, which made diagnosis easy. In my two trips I was to treat 5,684 patients. No patient ever died or grew worse because of my treatment. Some died in spite of treatment, and some because they needed treatment far beyond my abilities. Most of the people who came to me were helped or cured by the simple things I was able to do for them. Five or six would probably have died if treatment had not been available.

The days began to fall into a pattern of medical work each morning and a variety of small chores each afternoon. Beg and Hayat were working as hard as I was. They were supposed to divide the jobs. One morning Hayat would help me in the dispensary while Beg cleaned house, bought food in the village and cooked, and the next day they would trade jobs. This was a good arrangement, but for some reason they both balked at washing the lunch dishes. There were long, embittered debates along lines familiar to any American family :

"I had to walk all over Baltit buying eggs this morning, while you sat in the cool hospital with the Sahib. *You* do dishes!"

"No! I had to work hard washing off those ugly sores and helping the Sahib while you loafed with your Baltit friends! *You* do them!"

And so on and on. Of course, no matter how I settled the question I was wrong. I didn't dare yield to sore temptation and yell "Shut up and do as I say!" because actually this argument was the first sign that they

were thinking of themselves as individuals with rights, rather than as servants. Two weeks before, they might have fought bitterly out of my presence, but I would never have known it. The new situation was hard to live with, but it was progress. I could only pray for Haibatullah's early return from Gilgit. A three-way division of chores would be easy to arrange.

The dispensary had been running about a week when we had a royal patient. The Mir and Ayash entered the dispensary room, followed by two servants, just as I was finishing cleaning up ringworm sores on a little girl. All of us stood as he came in, and the waiting patients kissed his hand. His attitude told me that he expected me to drop everything and attend to him immediately, but right then I knew that a precedent must be established.

"Just a moment if you please, Mir Sahib," I said respectfully. "I'll be with you as soon as I finish this patient. It is medical custom that we cannot stop in the middle of an operation for fear of injuring the patient."

"Very well, John," he answered cheerfully, "we can wait."

I smeared salicylic ointment on the thoroughly awed little girl (who scurried out like a chipmunk as soon as I released her), washed my hands, and turned to him.

"How can I help you?" I asked.

"Well, John, I have considerable pain shortly after each meal, especially after curries, which I love. Have you something for that, please?" I gave him one hundred milk-of-magnesia pills for regular use, as mild alkalisers, and twenty mixed-carbonate pills in case of a violent stomach-ache. The Mir was a good trencherman who did not exercise; he had earned his hyperacidity.

As he handed the pills to a servant, he told me that his Rani was troubled with sore eyes which boric acid did not relieve. I gave him a bottle of sulfacetamide with careful instructions about its use.

The Mir thanked me and Ayash Khan stepped forward. He wanted some paludrine, and a bottle of sulfacetamide to send to his old milk-mother at Ghulmit, twenty-three miles away. I knew that the poor woman was blind from a cataract operation complicated by trachoma, and her eyes were certainly sore, so I gave Ayash his medicine, too.

"Thank you very much, John," said the Mir, and added that he would like to have me come down for tea at four that afternoon. Hayat and Beg bowed as the Mir and Ayash turned and left. We heard the flurry of the waiting patients on the stairway rising and saluting. The

first royal medical visit had passed off successfully, and I returned to my patients.

It was pleasant to have tea in Westernized surroundings. Only those who have lived within an alien culture can realize how stealthily it drains one's spirit. I had been only a few days in the old castle, but the odd relief I felt, sitting in the Mir's overstuffed armchair, told me that I was beginning to slip into an Asian way of life and my own nature was rebelling against it.

We had finished tea and cookies, and were drifting into a comfortable conversation, when the Mir brought me back to realities.

"John," he said, "the rumor has come from Gilgit that America is about to take over Hunza. Your living in the old castle is said to mean that America is now in command, and you are my superior. This word is in every village, and all of my Hunzas are worried."

"Mir Sahib, what should we do?" I asked. "I certainly don't want to make trouble for you. Would it help if I moved out again?"

He chuckled. "Let them talk! In a little while everyone will see that it isn't true, and then this lie will rebound on the wicked people who started it. Beside," his voice stiffened a little, "I am still the Mir of Hunza and I put you in the castle. No rumors are going to force me to change my decisions."

I thanked him and the talk drifted to other subjects. As I climbed the trail back homeward, I realized that this project wasn't going to operate at all as I had anticipated. I had naïvely expected that it would be a simple contest between my technical training on the one hand and the poverty and backwardness of Hunza on the other. There might be spectators, but essentially it would be a romantic duel, like that of St. George and the dragon. Now I understood that instead, I was but one actor in a play where everyone had his own idea of the script! There was, first of all, the Pakistan Government at Karachi, which wanted technical surveys and reports. Second, the local official group at Gilgit, many of whom wanted me out. Third, the Mir of Hunza, who wanted me in, but on terms I did not yet know. Fourth, the old men of Hunza, who welcomed medicine and gifts, but would resent foreign ideas. Fifth, the young men of Hunza, who might welcome any chance to improve their lot. Every action, every decision I made would be judged by all five. Any of them could ruin my venture if I did something they really disliked.

No man could possibly serve five masters. I was bound to please some and annoy others. There was but one solution for this situation—

to set up an order of priority, and form all my decisions in terms of it. Since my primary mission was to teach people how to use the resources I discovered, my primary concern must be the most educable group, the young men of Hunza. All my future decisions, therefore, must be made with their welfare and approval as my first consideration; but what should be the next most important group? Plainly, the Pakistan Government at Karachi, which had power to overrule all the others and was, so far, friendly to me. Third? The Mir of Hunza, who had direct authority over me. Fourth, the Gilgit officials, who disliked me anyway, but could do nothing but advise the Pakistan Government and the Mir. Last, the old men of Hunza, who would certainly oppose new ideas but were powerless against a combination of the Mir, their own young men, and the general tide of progress. This could become confusing at times.

Just then I entered the little open way before the Baltit mosque. A small crowd of men, relaxing after their day's work, hushed their talk and sprang to their feet. Right hands went to foreheads in Muslim salute, and every one murmured "*Salaam alaikum, Sahib.*"

"*Wa-alaikum salaam,*" I answered, trying to catch in each brown, tired face the thought of the man inside. The form of respect was there, surely, but not one smile lighted nor one frown darkened that impassive row of salutes. I was *in* Baltit, but not at all of it.

The little boy with the sores came to the dispensary every day. At each visit I cleared up a few more of them. Finally one morning he came to me walking under his own power, with only a few clean, healing places where the worst sores had been. I checked him over, gave him some iron sulfate and a few more vitamin pills, and told him he was well.

"Thank you, Sahib," he said gravely, and walked out. My first really serious case was closed, patient fully recovered. There would be others, but that one I shall always remember.

The husband of a tuberculosis patient whom I had seen two days before came with news that his wife was now hemorrhaging and much worse, and please would I give him some medicine. They never asked me to call, because that was simply unheard of; they only said, "Our trouble is very great, Sahib." I told him I'd come to see her in the afternoon. Next came the father of a sick ten-month-old baby, and I promised him I'd call also. Then I learned that the tuberculosis case lived on a cliff two miles east, reached by climbing down five hundred feet and back up fifteen hundred, and that the baby lived below Baltit, or

half a mile west and down six hundred feet. Oh well, perhaps a good climb was just what I needed to cure my chronic dysentery. One of the many good things about this job was that it left me no time to worry about my personal problems.

After lunch, Hayat and I started for the home of our tuberculosis patient. We crossed the canyon below the east wall of the castle, followed the narrow footpath up the other side, and struck out through the terraced fields of Altit, tan with the newly-plowed ground of wheat planting. It was a day when a happy breeze skipped beneath a brilliant sky.

"These fields belong to my clan, the Hakalakutz, Sahib," Hayat remarked as he led me along a twisting path. "There is my uncle's land, and that ahead is my father's." The fields were beautifully kept, but only as big as an American suburban vegetable garden; and this family, I knew, were among the well-to-do of Hunza.

"Where are your relatives?" I asked him. "I don't see anyone here."

"Oh, they are all at my father's house, waiting to greet you," he said calmly.

And I hadn't even known I was going to call on his father! How in the world had he managed to send news of my coming to them, when he'd been working beside me every instant since morning? It was my first contact with the mysterious communication system which makes everyone in Hunza aware of your plans almost before you formulate them. Later, as I traveled around the country, I realized that one is never free from the scrutiny of watching, though not unfriendly, eyes.

We trotted along another path, and came to an open space. Two apricot trees stood beside a small, gray stone house. A group of men, who evidently were waiting for us, broke up and a tall man, dressed in white, came toward me.

He walked with great dignity, shouldering as he did so the .22 rifle I had left in Hayat's keeping last year. At four paces distance he halted, and snapped the rifle into a rattling, "Present arms!" I returned a wooden-soldier hand salute, which felt silly with all the clan watching but evidently pleased him tremendously. Then I stepped forward with my hand outstretched, and said, "*Salaam alaikum*, Nuri Hayat!"

"*Wa-alaikum salaam*, Sahib!" His blue eyes were friendly beneath the well-brushed, snowy hair. He turned to a young man in Pakistan army uniform who stood beside him, and said a few words in Brushuski.

"Sahib," the soldier told me in Urdu, "I am Gohor Hayat's brother." He went on to say that his father was sorry he spoke neither English nor Urdu. He invited me to enter their home and visit them.

"Thank you," I said, "Please tell your father that as a former soldier myself, I will be happy to visit the home of the commander of Mir Ghazan Khan's bodyguard!" *

Nuri Hayat's tanned face creased with pleasure when his son translated this. With a sweeping gesture he invited me to enter his house.

I led the way up a ladder, through the smoke-hole to the roof. Here was a smaller, second-story room with a door and a large window space. It was earthen, of course, but was light, airy, and spotlessly clean. This was the summer living quarters of Hayat's family.

Nuri Hayat and his soldier son and I entered the room and sat down on some wooden chairs. Gohor Hayat and all the family stayed on the roof outside, near enough to hear without obtruding.

At Nuri Hayat's command, one of the relatives brought a dish of walnuts and apricot nuts, then two soft-boiled eggs and a cup of tea with milk and sugar. These were well-to-do people by Hunza standards, but I knew that sugar and eggs were luxuries even they could not afford very often. I tried to tell Nuri Hayat how much I appreciated his hospitality, but he broke in before my remarks were half interpreted. The young soldier smiled as he translated for me.

"My father says that it was you who first brought honor to our family by your gracious treatment of my brother. We are not poor people, and we would be lacking in spirit if we did not show you hospitality in return." Then he suddenly asked, "Gohor Hayat tells us the Communists are enemies of America; is this true?"

"Yes, it is true."

"My father says 'Death to the Godless enemies of Islam and America'—and I say so too!" He smiled at me, a little scared that he had dared to inject his own sentiments into his father's conversation.

After a pleasant chat, I told Hayat to stay and visit with his brother while some of his relatives guided me on to my patient. A couple of twelve-year-old cousins took me on up the steep mountain face, leaping happily from boulder to boulder, then waiting respectfully for me to catch up. A thousand feet we climbed to a small patch of orchard and fields among the bare cliffs, and there was my patient.

She was lying on a pallet of ragged cotton blankets which her husband had made for her on a grassy bank beneath a tree. She was coughing a great deal, with thin blood coming at times from her mouth. Her three small babies were in bed beside her. Her family had given her pure

* Mir Ghazan Khan was the father of the present Mir; he died in 1939.

air, the blue beauty of the sky, and the company of her loved ones. More they could not do.

I told them to send the three little children away, which they politely refused to do. Then I called the husband to one side and told him gently that his wife would go to Allah's Paradise within a month. Medicine could no longer help her. He accepted it very quietly.

"If that is fate, it is fate," he murmured, "thank you for coming, Sahib." These people expected very little of life or of those about them.

We climbed back down to Hayat's house. Although I offered him the rest of the day off to visit with his brother, he refused. We finally arrived in Baltit and located the sick baby. The little fellow had scurvy sores in his mouth, a few on his skin, and a bad cough, but he was husky and in fairly good shape. Before I finished treating him, neighbors had brought in two more ailing babies and two malarious adults. Was there never an end to the sick people here?

As we slipped through the narrow, crowded lanes of Baltit on our return, realization of my position came to me. This had been a long day. I had seen fifty-two people. About twenty-three thousand more were scattered over twelve thousand square miles of mountains, and I had only a knowledge of anatomy and first aid. I felt like a man trying to stop a thunderstorm. Furthermore, medicine was not my primary purpose here. Then, too, where was Haibatullah? He should have returned from Gilgit days ago. And what did these people actually feel about me? What was going on behind those sober, unsmiling faces we were meeting? Hayat's father had been courteous, but were the other Hunzas friendly? I was alone among these inscrutable people. What would happen if I failed, alone up here? Just then we passed a pretty teen-age girl. Sherin Beg grinned hopefully at her, then blushed and hung his head when I caught his eye. The utter normality of it swung my whole world back into proper focus, and the momentary panic was over.

CHAPTER V

Rocks, Pills, and People

THE Fourth of July arrived, and brought with it a slight nostalgia. In our family this day rivaled Christmas as the great celebration of the year. As children, when we lived in Illinois, my brothers and I would save for months in order to buy enough fireworks so we couldn't possibly run short.

There were no fireworks in Hunza, but a celebration was plainly indicated, so I decided to go camping. On the evening of July third, I loaded my pack with salt, tea, wheat flour, the foreleg of a sheep, and an aluminum skillet. At dawn next morning, while Beg was cooking breakfast, Hayat rolled up one of his blankets, fixed my sleeping bag, and fastened the carrying straps. The boys were to alternate as my assistant on these short trips; Hayat had wanted first turn.

Fortunately, the patients who showed up in the dispensary had fairly simple ailments. We were off in no time at all. Hayat shouldered the bedding, I took up my pack, hung my geologist's hammer in my belt, and we started. The light clouds of early morning prolonged the cool dawn, permitting us to walk quickly. We made excellent time going west two miles to the mouth of Hyderabad canyon.

A number of veins of granite pegmatite crossed the bare, rock walls of this canyon, and in one of these veins huge crystals of muscovite mica flashed in the sun. The talus below the cliffs was littered with sheets of mica a foot across. Sheets of this size could be used in electrical insulation and were worth several dollars a pound. If this deposit was large enough to justify development, it would be a real source of income to Hunza and to Pakistan. Best of all, it would give employment to many local people, because mica must be mined and trimmed by hand.

I had explained all this to Hayat, and he was as eager a prospector as I. We could both see that the mica deposit on the cliff face extended only about fifty feet, too small to justify an industry, but pegmatite veins are like slices of plum pudding; there is no telling where the next raisin will be found. Another mica deposit might outcrop on the same cliff, or five miles away, or might not occur again in the whole mountain range.

Hayat scrambled over the boulders like a young ibex while I panted disgracefully behind him, sitting down frequently to rest.

"Look," I called to him between gasping breaths, "your people have known about this mica for years. Haven't any of them figured a use for it?"

"Oh, yes, Sahib!" he answered happily. "Sometimes the British at Gilgit would take photos of their Hunza servants and give them copies. Our people are very proud of their photos, and protect them with this mica."

"You and I will have another use for it," I told him. "Tomorrow morning we'll load our packs with big pieces. When we have time, we'll split these into thin sheets and bind them together with that little machine that fastens paper"—my hand stapler. "We'll put mica windows in the castle to replace the broken glass panes."

"Fine—we won't be so cold next winter!" he agreed enthusiastically.

We decided to go on up the canyon, since no more mica deposits showed here at the mouth. A dim little trail led into the gorge, then northwest up the sunny mountain face. It was the usual Hunza trail. Ford an icy stream, step on a rolling boulder, and dig your toes in the cracks of a bare rock face steeper than a pair of stairs and a quarter-mile high. We worked gradually to our left until we were behind the first mountain ridge and out of sight of the main oasis.

The trail led us up to a rock hut, perched on the steep mountain-side beside a tiny stream which rushed through a slot in the cliffs we had just traversed. An enterprising farmer had built a series of terraces here, little ten-foot-wide fields held up by rock walls six feet high, and had diverted a trickle of water from the stream to irrigate them. Luxuriant alfalfa made the fields a chrome-green speck on the rocky slope. Hayat and I decided to camp on the roof of the hut; it was the only place flat enough to lay our beds.

Sitting on the rooftop in the sun, we had a fine lunch of tea, heated over a little sage fire, fried mutton, some chapatis left over from breakfast, and a little chocolate syrup. It was a real Fourth of July feast, with the rumble of small avalanches tumbling down the great range to the north to simulate explosions of fireworks.

Then we climbed the south ridge. The low mountain flowers were all in full bloom, forget-me-nots, wild sweet peas, wild roses, edelweiss, several different buttercups, pinks, a purple orchid, and many small pink and purple flowers I didn't know; bubbles of color dropped among the boulders of the wind-swept slope. They furnished Hayat and me

with fresh bouquets for our hats almost every hour. A Hunza without flowers in his hat would be as unthinkable as a Bavarian without a feather. I wondered as I picked them how many of these varieties could be used for the wild-flower garden which I must start soon.

I had to stop frequently to give my forty-year-old heart a chance to catch up, and finally these rest-stops were too much for Hayat's sense of humor.

"Ah, you tough Americans!" he kidded, poised on a ledge with the grace of a hawk on the wind, "inspecting every rock for mica! And on your hands and knees, too!"

"While you softie Hunzas merely trot over them without a second look!" I gasped back. "Never mind. I may puff now, but within a month I'll be running ahead of you!"

"Try it! Try it!" He grinned proudly, and darted off again. He was aggressive and gallant—potentially a fine man or a bitter, violent one, depending on his training.

When we reached the top, we found ourselves directly above the mica prospect, as I had hoped. The same veins that had streaked the cliff below outcropped here on the ridge as horizontal bands along the flat crest. We followed them as far as we could, but found no mica. I did learn, though, that these veins were vertical, and trended north 30° west along the mountain face. This meant that I could find them again in the next *nullah* (canyon) to the west and probably also in the nullah to the east. Profitable quantities of mica might occur anywhere along the veins in either direction.

We returned to our rooftop camp at dusk, and had supper. I crawled into my bedroll and Hayat rolled up fully clothed in his blanket, Hunza style. It was fairly cold that night, too. Rocks fell intermittently from the neighboring eighteen-thousand-foot peak but, as they were across the canyon and a mile above us, there was no danger. The little creek roared in the canyon below, our own irrigation ditch gurgled beside us, a dozen night birds twittered overhead, and the cawing of several ravens stirred a wandering donkey to cacophonous reply. The cymbal crash of falling boulders punctuated the more constant sounds. We were sleeping in the orchestra pit of the Karakoram mountains.

Hayat waked me at 4:30 the next morning. We breakfasted on chapatis and salted tea, and started down the mountain side. Climbing down was much faster than climbing up and required much less breath, but it was also far more dangerous. The continuous effort of holding back soon tired the front of our thighs until they quivered. Then we had

to move very slowly, lest our own lack of control send us falling. We filled our packs with mica when we reached the canyon mouth, and turned east up the main trail for home. I had had a pleasant vacation and my geologic survey was started at last. We reached the castle by mid-morning.

A message from the Mir awaited me.

Your people are at war with the Communists and I know you will want to hear the news on the radio. Please be my guest at dinner tonight and listen with me.

MD. JAMAL KHAN

The rest of that day I accomplished very little. Was the fighting in Europe or in Asia? How had it started? Had there been another Pearl Harbor? Were Americans actually fighting Russians at last? Was I still young enough to be used as a scout? Would this end my project in Hunza?

Finally I could wait no longer, and hurried to the palace at four-thirty. A servant ushered me into the reception room where the Mir and Ayash were having tea.

"So glad you came, John," the Mir greeted me cordially. "You'll be in plenty of time for the broadcast."

"What station did you hear it from, Mir Sahib?" I asked, forgetting even elementary courtesies, "are you sure the news is authentic?"

"It was the Voice of America broadcast from Manila," he replied. "Your own Government broadcast it, so there can be no doubt. Your people are fighting the Communist devils at last!"

"Where, Mir Sahib? How did it start? What has happened—forgive me, please, sir; I didn't mean to question you rudely!"

"I understand your impatience," he smiled. "The fighting is in Korea. Ayash and I couldn't quite understand, but I think it is the Chinese rather than the Russians who attacked."

The next broadcast was not until 8:00 o'clock, so there was nothing to do but finish our tea and await dinner. I told them about the mica prospect and outlined my medical work of the last few days. They knew of the mica, but hadn't been aware of its great commercial value. Both of them were deeply interested and urged me to prospect further. Then the Mir's face grew serious.

"More stories are coming up from Gilgit, John," he said. "I know my people are worried. They keep asking me about these things every morning in court."

"What now?" I asked.

"Well, the Gilgit people are still saying that I have sold Hunza to America, and you have come to take charge. Yesterday, your ambassador said that he will visit Gilgit late in July, so it is rumored that when he comes you will fly the American flag from the old castle and he will take over officially!"

"Oh, for goodness' sake!"

"Also it is said that you have come with much money to buy all the land in Hunza, dispossess my people, and bring Americans in here to replace them."

I had a clear notion of how many Americans could be forced to live under Hunza conditions, but I didn't mention this to the Mir.

"Mir Sahib," I said, "if you are willing to endure the inconvenience of these rumors, suppose we do these things: First, I'll never visit your daily *darbar*,* so they'll know I have no influence there. I hadn't known about the ambassador, but I'll try to be in Gilgit when he comes—"

"Then they'll say you went for conference with him," Ayash interjected.

"True, but at least that won't implicate you. I will not buy any land for my experimental garden plots, as I had planned. However, could I use a little of that terraced pasture of yours up Ultar Nullah to raise wildflowers for seed?"

"Of course we can arrange that," the Mir said. "The pasture is my own property, and I can let you use it as a personal favor to my guest. No one can misinterpret that!"

I didn't want personal favors, but it was the only way to get the use of land without buying it. These rumors had made purchase out of the question, if the Hunza farmers were to be reassured.

We had a meal of curried mutton and rice, stewed vegetables, and sliced fresh pears with soft custard. It tasted rich and good even though my attention was mostly on the coming broadcast. We drank our after-dinner tea upstairs in the Mir's office, beside the radio. The Manila announcer's voice carried me out of the bare, whitewashed room over the four thousand miles of mountains, deserts, rivers, and hills, northeast to the first retreat in Korea. At last I knew what was happening.

As I walked back through the dark to the old castle, I tried to plan what to do (a) if the Korean war became a world war; (b) if it remained local; (c) if it stopped quickly. If the war spread, I decided,

* *darbar*—court session.

there was no use planning; all projects must stop or continue at the will of the governments concerned. If it stopped quickly, my venture here would not be affected. If it continued as a limited war, the presence of an American so close to the Chinese and Russian frontiers might well be embarrassing to Pakistan. All I could do, therefore, was to start my various projects as quickly as possible, and pray for the best. I had hoped to operate without pressure, but now there was need for haste.

Two of Hayat's cousins came to me for inspection the next morning. After looking them over, I hired both boys. The older, Amir Hayat, was a slim-faced, brown-skinned fellow about sixteen. His job would be to plant and superintend the wildflower garden for me in Ultar Nullah. I had promised to bring Hunza wildflower seeds back to the wholesale florists in Illinois in exchange for the vegetable seeds they had given me. If any of these would produce marketable flowers in America, the dealers would buy seeds from Hunza thereafter. These wildflowers could be grown in small plots high in the mountains, where they would not compete with food crops. Thus, small, fertile hollows on unproductive mountainsides could be made to raise a cash crop.

The younger boy was Ali Johar, a stringy little thirteen-year-old with black hair, flashing black eyes, and dark brown skin. He was to catch butterflies on the cliffs above Ultar Nullah while his cousin was raising wild flowers in the pasture below. The Carnegie Institute had given me a contribution to pay for specimens to add to their splendid collection of high-altitude butterflies. This was part-time employment, because the butterflies were active only during the two or three summer months of each year. Summer was just the time when Hunza farms needed most attention, so I couldn't hire a man. Ali Johar was nimbler, anyway, and his fingers weren't so heavy.

These two were to be part-time workers only. They would live at their homes, and receive some clothing and fifteen rupees per month for their work. I told them to come back tomorrow noon to learn their jobs.

They showed up exactly at noon the next day, as I was treating the last clinic patient. After lunch, Gohor Hayat, the two of them, and I left for a hike up Ultar Nullah. Sherin Beg asked to stay behind. Naturally he was teased unmercifully about staying back to see his girl friends. He didn't lose his temper, but he was so embarrassed that he hid his face, which meant that he was an even-tempered boy. It occurred to me that if he did have a sweetheart, he certainly couldn't go visiting her in this Muslim country.

The rest of us followed a path northward beside an irrigation ditch to Ultar Nullah's mouth, a dark slash in the mountain face directly north of the castle. Hayat was carrying my .22 rifle, and Ali Johar had a butterfly net held rather uncertainly over his thin shoulder. The four of us made quite a procession.

Inside the canyon the trail followed a narrow gravel bank overlooking the melting glacier to our right and itself overhung by the bulging cliff wall to our left. We stopped to align the sights of the .22. This was great fun for the boys, because it meant firing many times at pebble targets to make sure the sights were true. Satyrid and Painted Lady butterflies hovered over the flowers which emerged from cracks in the cliff face. I netted a couple and showed the boys how quickly they died in the cyanide jar. When they were all impressed by the danger of breathing the air even near the jar, I let Ali Johar carry it. He took it gingerly, proud of his new responsibility but holding the jar well away from him. He also had to be taught to ignore Painted Ladies and concentrate on Satyrids, that Blues and Spangles were wanted, that butterflies must be really dead before they were put in envelopes, that envelopes could be sealed, and that fingers ruined butterfly wings, but tweezers properly handled didn't. A very busy afternoon for a small boy who had never been to school or seen an envelope or glue before.

We followed the trail three miles, up to the beautiful little glacial bowl of Ultar. Here, in days not so long gone, six mighty glaciers had crashed down from the encircling peaks to form the main Ultar glacier. At the place of their joining they had gouged out this little basin, now a beautiful alpine pasture, the bare rocks covered with a loose mat of grass and flowers. The air was filled with trills and gurgles of melt-water dripping and trickling among a thousand boulders and the jarring crash of ice dropping over a great glacier-falls. We had just reached Ultar when the afternoon shadows brought an evening chill to the air. The butterflies vanished like children at hide-and-seek.

Ahead of us a low stone hut merged with the hillside, surrounded by rock-walled corrals, all exuding the stifling, pungent odor of dried manure. We turned hastily to the slope on our left. A whole series of little rock terraces stair-stepped down the grassy hill. A few were viridian green with alfalfa, but most showed bare grey earth. A tiny ditch chuckled down the slope running beside waist-high rock walls, bristling with thorn brush. I chose a small terrace which lay next to the water and the protecting wall.

"This will be our wildflower garden," I told Amir Hayat. "Your

first job will be to build a rock-and-thorn wall all around it, so the goats cannot break through. Afterward, dig the ground with this pick"—I gave him a light prospector's pick—"and then plant your wildflowers." I explained to him why we wanted the flowers, and told him not to take violets, buttercups, daisies, or dandelions, because we already have those in America. He listened very intelligently until I began to explain how to transplant, then he interrupted me.

"I already know that, Sahib," he assured me, his thin face very earnest, "because we do that at home with tomatoes and peppers." He meant well and I knew he would do his best. There was no use confusing him with too many instructions.

It was late afternoon now, so we hurried back down the canyon. We reached home before dusk. I had no sooner entered my office than a great commotion arose outside in the courtyard—donkeys brayed and several men shouted at once. Footsteps hurried up the stairs and Haibatullah burst in, smiling happily.

"Did you think I was lost, Sahib?" he asked. "There were no caravans in Gilgit, and I had to hire a couple of degenerate Pathans with donkeys." They had grown frightened of the trail, he explained, and he had promised them extra *baksheesh* in order to get them to come at all. As I handed him my wallet, I asked him if he was all right and what about the baggage.

"We had one accident at that steep place the other side of Murtzabad," he told me over his shoulder as we hurried downstairs, "and one donkey fell. Your two boxes of malaria medicine rolled about a hundred feet downhill, but they caught on a boulder right at the edge of the cliff over the river. It was caused by very bad donkey driving—that place wasn't really dangerous. Don't give those Pathans any extra *baksheesh*, Sahib!"

"Did you get the medicine back?"

"Yes Sahib, I climbed down and carried the cases up myself, but I think some bottles are broken inside."

We paid off the bearded, shifty-eyed drivers, who promptly howled that the trail was the worst in the world, Haibatullah had tricked them into coming, they couldn't stay in Hunza because Hunzas hate Pathans, it was dusk now, and they needed more money!

I told them they could sleep in the castle courtyard, while Haibatullah reminded them that Hunzas, Turks, and all the world hate Pathans for the lying bandits they are. I gave them firewood and a little rice, but no money *baksheesh*, in obedience to Haibatullah's wishes.

Our two newest employees, Ali Johar and Amir Hayat, showed up for lunch the following day. Afterward all of us unpacked and sorted the luggage Haibatullah had brought. I had a wonderful staff. Only a person who has been in Asia could appreciate what it meant to be able to trust one's helper to organize a caravan, sort out all kinds of equipment, pack it, and bring it seventy miles. Haibatullah had coaxed, cajoled, bribed, and threatened those two Pathans all the way, in order to keep them from turning back, and still the trip hadn't been unduly expensive. One of the two atabrine cases was undamaged; 41 bottles out of 228 in the other case had broken, but we managed to salvage 2500 of the 4100 loose pills.

Everyone felt in good spirits that afternoon, and as work was over by 4:00 o'clock, I brought out the boxing gloves. This was entirely new to them, and at first they shied from it. The very idea of socking the honored Sahib! This they could never do! Striking any older person was utterly against all Asian custom. Finally I ordered Hayat to put on a pair, and then ordered him to hit me. He gave me a powder-puff tap which I countered with a moderate jab to his nose. Then we were off to a good start! I boxed a little with each of them, and was pleased to see that they showed courage and could take it without losing their tempers. Sherin Beg and Amir Hayat used roundhouse swings and would take two in order to land one, but Gohor Hayat had the makings of a clever boxer. Hindu boys would have cried at the first blow, and most Asians would have regarded the whole game as undignified.

Ali Johar, our butterfly catcher, was too small to box with us, but he watched happily. He was a quiet boy whose parents had died when he was ten, leaving him alone with a farm which he was much too young to operate. The village elders of Altit feared that any man who worked Ali Johar's farm for him would establish a claim against his land. They therefore arranged a marriage between Ali Johar and a girl a year younger so that her father could work the farm as part of his duty to his son-in-law, without establishing a claim upon it. Either of the two children would, of course, be free to divorce as soon as they grew up. This was one of the very rare cases of child marriage among the Hunzas. Hunza young people usually marry when the man is seventeen to twenty-five, and the girl is fifteen to twenty.

The Wakhis of northern Hunza customarily arrange marriages between pre-adolescent children, and permit the children to live together, but the Wakhis are scorned by the true Hunzas for this custom.

Even the Wakhis have never practiced the abominable Hindu custom of marrying adult men to pre-adolescent girls.

Haibatullah's return relieved me of many small household worries, and gave me more time for work on my main projects. The hospital was functioning better every day, as Beg and Hayat learned about medical work and as the people of Hunza learned how to be cooperative patients. Ali Johar was catching butterflies as planned; Amir Hayat would start the wildflower garden as soon as he could build the rock wall to keep the sheep out. The woodcarving school should logically begin in September, when regular school opened. The geologic survey had been started by my trip to the mica locality, and I knew where to go to follow those pegmatite veins further.

Only three real troubles clouded the way ahead. First, of course, were the rumors spreading from Gilgit, which I feared must influence the Hunza people. Second was my own health, which was slowly deteriorating as dysentery continued to weaken me. This I could do nothing about; although it was a nuisance, it had not, so far, seriously interfered with the work.

The third situation was just developing, and I didn't know how to solve it. The Mir's first appeal for medical help had not been his only one. A few days before, after several smaller requests, he had sent up an order for five hundred stomach pills, a whole pound of 20% sulphathiazole ointment, five hundred aspirin, and a large bottle of boric acid eyewash. He and his family were using medicine at a rate which alarmed me, both for their safety and for my reserve supply. After the Mir's numerous favors to me, I certainly couldn't refuse his request. He was also beginning to express a hunger for all the conveniences of civilization. A few days before he had informed me that, since the type of my portable typewriter was smaller than I liked, and the type of his was too large for his taste, we could trade typewriters to mutual advantage. He neglected to mention that my typewriter was brand new and his was a battered relic of 1930. It would be impossible for me to operate if too much more of my equipment was drained off in this manner, and equally impossible to remain if I angered him by a refusal. These three problems were to remain a constant worry for the remainder of my life in Hunza; although I circumvented them in various ways, I never found a solution.

A few days after Haibatullah's return I ran my second geologic trip, looking for mica in the next canyon west of the original prospect.

Sherin Beg and I left Baltit in the evening, with our old horse Bili carrying pack. We traveled west four miles to Aliabad, and camped for the night in the dak-bungalow. We had hoped to buy eggs and either mutton or chicken at Aliabad, but none were available, which meant that we would go meatless into the mountains.

This was a much longer canyon than Hyderabad Nullah, which Hayat and I had explored two weeks ago. It ran south out of the Karakoram straight as a sword-cut for several miles to its mouth here at Aliabad. If my figures were right, the pegmatite veins I had seen in Hyderabad Nullah three miles east should cross this nullah in a zone from two to four miles north of us.

Beg and I made good time the first two miles, following an irrigation ditch cut in the side of a cliff. Then we came to a series of jumbled glacial moraines choking the canyon bottom, with bare gravel hillocks and huge boulders lying helter-skelter, slowing our progress. Above was the snout of Shishpar glacier, whispering and gurgling with melt-water in the bright sunshine. The trail rounded the nose of ice and followed the lateral moraine, a high ridge of loose boulders, sand, and clay which the glacier had dropped between itself and the vertical rock wall.

It was the very worst kind of trail, with the shaky bluff over our heads dropping rocks at us all afternoon, while the narrow track we were treading kept crumbling from beneath our feet and threatening to drop us onto the ice a hundred feet below. There was nothing spectacular, just a continuous nuisance and a little danger if one didn't watch—rather like crossing streets in New York. I tired badly; Beg didn't but, unlike Hayat, he was patiently solicitous of me. Rocks were melting free and sliding into crevasses in the glacier all afternoon. Shishpar is a very dirty glacier; black, sandy ice stood in heat-eroded spires on its surfaces with piles of wet gravel scattered between.

Finally we reached a great bowl, two miles long and a mile across, where eleven glaciers previously met to form the source of the one we had been following. Surely this is the greatest view in the whole Asian cordillera: three 25,000 foot peaks around us, eleven glaciers in sight at once, and the rock walls going up sheer and clean for three miles.

We built our fire on a windy knoll. While Beg was cooking, I found a little hollow in a bare moraine, lined with wild rosebushes twelve feet high. It was a fine place to pitch our tent. The bushes and the bouldery rim deflected the glacier-chilled breeze upward and left our little hollow very comfortable.

At breakfast the next morning the usual thundering sound shook

the air, and one big glacier vanished temporarily behind a rolling white cloud of avalanche snowdust.

Sherin Beg climbed a dim trail to a goatherder's hut, and bought a little fresh butter and some weird, sour cottage cheese. Meanwhile, I climbed a short, steep canyon looking for mica. The pegmatites were here, with some very good potash feldspar, but no mica. I angled across a slope to meet Beg.

Together we crept out on the rim of a great mountain buttress, like flies on the shoulder of God. We rounded a curve, and there suddenly was the whole sweep of Hunza valley, tiny below us, and the great rock peaks above. Sherin Beg sat down.

"What are you doing?" I asked.

"Looking at my mountains," he murmured. He showed me then the meaning of worship, which is a quietly deep emotion that our bustling, analytical minds must re-learn.

At last we returned to camp, ate our lunch, and started back toward Aliabad. The sky clouded over as we entered the bad trail, and Beg cocked one eye heavenward.

"Hah," he said, "right on time, as I ordered."

"What's on time?" I grunted, scrambling desperately as a ton or so of trail fell from under me.

"Those clouds," he answered calmly, extending a hand to give me a boost. "I ordered them to come for this hard part of our trail, to keep us cool. Didn't you know that I am a famous cloud-maker?"

"Thank you for the courtesy," I told him. "Let us hope you are not so capable that they grow thick and rain on us!"

"Certainly not—I have them under my power!" he replied, giving me a glowing smile, and on we went. Beg was a perfect outdoorsman, even to his jokes. I've known American mountain men to say the same things. It was a pleasure to be with him; he wasn't dramatic, but he was quiet, strong, and agile. He went down that four-inch-wide collapsing trail like a mountain goat, while I wallowed behind like a lumbering cow, invariably stepping where the footing was insecure.

I had learned that the pegmatites did continue northwestward, but that they contained no valuable mica in that direction.

CHAPTER VI

A Temporary Setback

ALMOST a month had passed since my departure from Gilgit. I had planned to stay in Hunza until September, but the American ambassador's proposed visit altered the situation. A trip to Gilgit now would make it apparent that I had no intention of raising the American flag in Hunza coincidental with his arrival. I could also do some geologic work up Dunyor Nullah (northeast of Gilgit), which would quiet the silly talk to the effect that "the American spends all his time in Hunza; he must be plotting." Thus I could simultaneously quiet the fears of the old men of Hunza and the rumors at Gilgit. I told my staff that Haibatullah and I would go to Gilgit soon and instructed Amir Hayat to lead my mare, Rani, down to the castle from her pasture in Ultar Nullah.

Meanwhile, we checked on the things I must bring from Gilgit on my return. We needed rice, sugar, tea, and salt. We needed tin cups—how did I ever forget those?—candles, a flashlight, carrying straps for a bedroll, another pan, and many other small gadgets still in our Gilgit headquarters. It wasn't easy to operate two headquarters, and there were always little things one forgot.

Haibatullah and I made a late start the next morning. Our first few hundred yards were like an obstacle race—take a few steps, stop and explain to a disappointed patient that there would be no hospital this morning; take a few more steps, explain to another patient. Hayat and Beg were staying at the castle, but neither of them knew enough yet to take over in my absence. I had authorized them to give simple first aid to wounds and atabrine to malaria cases, but to treat nothing else. Many of the patients were very persistent, but we could not allow ourselves to be detained.

We had gone only a mile when my mare started to limp. I discovered that someone had neatly stolen all four of her shoes. It could only have been one of the Mir's shepherders up in Ultar Nullah, because they were the only people who had been near here. Sixty-seven miles of rocky trail on an unshod horse! I would have to walk most of the way or risk crippling Rani badly.

We left the main oasis below Murtzabad at noon, and traveled slowly down the barren valley. We reached Maiun and the Mir's bungalow just at dusk. Two village chiefs and several men and women with small children were awaiting us. Before I could dismount, they were pressing against my stirrups.

"Sahib, Sahib, *bimar hai, is abadimei! Mehrwani, dawai dedo!*"—"Sahib, there is sickness in this village! Please, give medicine."

From all sides came the plea, "*Dawai dedo!*"—"Give medicine!" More people were joining the crowd every minute.

"What's the trouble—tell me at once!" I ordered the nearest lumbarदार.

"Dysentery, Sahib! It came to us only ten days ago, and already seven children and one young man are dead! It starts suddenly, and within a day blood comes, and we are very sick."

I dismounted, and was jammed back against Rani by the crowd of anxious people. "I can't give medicine with these people trampling on me," I called to the lumbarदार. "I'll sit there on the edge of the veranda, and you line the people up in two groups. Those with dysentery here, and those with other sicknesses there. Now do this fast!" With much pushing and argument, the tragic line of dysentery victims started to move toward me. Eight sulfaguanidine and six diodoquine, eight sulfaguanidine and six diodoquine, over and over and over. Each lean, drawn face swung into focus before me, told its trouble, and left. First by the light of sunset, then by match-light, because we had no candles. I was very tired from the day's walk and ride, but suddenly a thought occurred to me.

"How did all these people know I was coming?" I asked the lumbarदार.

"Our Mir Sahib spoke over the telephone this morning and told us to spread the word to all the sick," he replied calmly.

But the Mir hadn't thought to mention the epidemic to me at all! How on earth could I predict what I'd find if he didn't warn me? I had come prepared mostly for malaria cases.

At 5:30 next morning, the first crying babies and murmuring sick folk sounded outside the bungalow. I sat up, then fell back with my heart doing odd flops and the dry cough of a heart attack shaking me. It was over in a few minutes, however, and I was able to hurry out for more patients. The last were treated at 8 o'clock when I had assured myself that all the sick of Maiun had been taken care of. We gobbled a little *chapatis* and tea and left.

All day we made very poor time, because Rani's sore feet and old Bili's tender back slowed us. Once we entered the dark canyon below Chalt, Rani began stumbling badly, so I sent Haibatullah ahead on Bili and led Rani very slowly. Some large mineral veins which I had only partly noticed before showed beautifully in the warm evening sunlight, and I noted them for later study. Rani and I reached Nomal long after sunset. It is dangerous to ride these narrow trails after dark, of course, but walking ahead of Rani was quite safe, except when she grew frightened of night birds or falling pebbles and shied. I enjoyed the peace and solitude of the darkness in that canyon.

We ate supper at 11:30 that night and consequently overslept the next morning. It took longer to recover from my heart attack that morning, too. The attacks weren't really serious, just a result of too much hard travel on a diet of chapatis and apricots, but they were perturbing. The day started out blazing hot; fortunately it clouded over by mid-morning.

Haibatullah and I ate our lunch crouched among some boulders at the edge of Hunza River. The river was high, slate-grey with sand, and roaring so loudly that we had to shout to be heard.

"Haibatullah," I yelled, "did you ever wonder how much sand that river carries?"

"Not until this instant, Sahib," he grinned, "but now you've mentioned it, I'd like to know! How would you find out?"

I showed him how to figure average depth, speed, volume, and percentage of suspended load. The figures were amazing. The river was flowing eleven feet per second—eight miles per hour—with an average width of one hundred feet and an average depth of three feet, all very conservative figures. This meant that about 3300 cubic feet of water passed us every second, or 204,000 pounds, about 100 tons. If the total sediment were only one percent (and I knew it was nearer five percent) this meant that at least one ton of mud, sand, and rock went down the river every second during the summer high water. In winter there was practically no sediment transported, and the water was blue and clear.

Haibatullah and I and two sore horses reached Gilgit in mid-afternoon. I dipped water from our irrigation ditch, bathed, changed, and called on my friend Major Tafael and young Dr. Raschid, the Assistant Surgeon, to let Gilgit know that I was back in town.

The next day was Id-ul-Fitr, the end of the holy month of Ramazan. This is the big day of the Muslim year, like Christmas and Thanksgiving rolled into one. Everyone is proud that he has faithfully observed the

fast, happy that the ordeal is over, and eager to celebrate a great religious holiday. The members of the official circle at Gilgit were visiting each other, wishing each other *Id Mubarek!* (Happy and wholesome Id), and generally enjoying the day. I joined with them and had a very pleasant time, eating good rich food, talking, and playing bridge. The cards were like relics from another world, because in spirit I was still in Hunza.

I rose fully refreshed after a fine night's sleep. We spent the morning buying in the bazaar. Sugar was thirty-four cents a pound; otherwise, living costs in Gilgit were about the same as in America, except that one got far less quality for one's money.

As soon as possible, I went to call on the Agency Surgeon, Dr. Mujrad Din. Colonel Rufi of the Gilgit Scouts was already having tea there when I arrived. In spite of the bitterness I knew the Doctor felt toward me, the two of them welcomed me courteously. I reported the epidemic of bacillary dysentery and the eight deaths at Maiun. Dr. Din replied that it was just the usual summer diarrhea from eating too much fresh fruit and that no one actually died of it. We finished our tea and I left, having caused the doctor further annoyance without, unfortunately, benefiting the people of Maiun.

This was July 18th. My diary of the next few days needs no elaboration:

19/7—Chased about on necessary but trivial errands. Dull day.

20/7—An old lady neighbor (who owned the cornfield next door) insisted I had stolen a boulder from her—Lord knows, her field is full of them, but of course I hadn't. I gave her five choice ones that were lying in my yard; strong temptation to drop one on her toe.

21/7—This diary will not become a record of the ailments of a senescent body. I shall from now on merely mark X and the name for sick days. Thus today—X. Heart.

22/7—Telegram from John Bowling (my U.S.I.S. friend at Karachi) says U. S. Ambassador will arrive 24th. I'd like to see an American again. I am not popular here, and the nervous strain of not knowing what is being rumored next is getting me.

23/7—X. Malaria

24/7—X. Malaria. U. S. Ambassador's trip indefinitely postponed. Major Tafael and the P.A. called on me. Agency Surgeon, Dr. Din, has left on a month's tour of Rettu and Komri (beautiful woods and trout fishing there and only sixty families.) His assistant, young Dr. Raschid, came and gave me quinine. I have paludrine and atabrine.

25/7—X. Malaria

26/7—X. Malaria

27/7—Better. Wrote letters. Sent a man ahead to Hunza with a donkey-load of sugar, rice, etc.

28/7—Haibatullah and I spent the day cleaning up, then left for Hunza at 5:45 P.M. Beautiful evening. My mare is lazy, stupid, and mean. We arrived at Nomal 9:45 P.M. . . .

We made a long day of it to Maiun, because it was very hot and several sick people halted us for treatment at Khanabad, the first settlement of Maiun oasis. We reached Maiun tired out at 8:30. Haibatullah finally roused the bungalow chowkidar, who brought us hay, slightly turned milk, and seven eggs. When we broke the eggs, six were rotten and the seventh held a baby chick. We ate bread and tea for supper. The lumbardars had refused to come and help because it was late. Several of them showed up early next morning, requesting baksheesh. I refused, telling them clearly where they could go.

The epidemic had largely burnt itself out. I had been able to give medication at a crucial time, so no more people had died. Now there were only a few chronic cases left, just enough to start another epidemic next year.

We reached Baltit at 4:15; Hayat and Beg received us with their usual bashful happiness. I went to tea with the Mir, and told him most of what had happened, including a request for him *please* to warn me of epidemics in advance. I made no mention of the conduct of his Maiun lumbardars; that was my personal problem. Then I brought up a subject that still rankled.

"Mir Sahib," I said, "I don't like to trouble you about this, but your herders up in Ultar Nullah stole the shoes off my horse. It made me great trouble on the road to Gilgit."

"Oh," he said gravely, "that is very bad. How do you know it was the herders?"

I was staggered. Surely he knew it must be the herders.

"No one else goes up Ultar Nullah at this time of year," I said. "Also my horse is vicious, and one man could not have done this alone; it would take several men at least two hours to remove her shoes. And if any other man went up to my horse, your herders would have seen them—the whole pasture is in sight of their hut."

"Those are strong reasons," he agreed seriously, "but if I called the herders into court, they would insist they hadn't done it, and that would end the matter. I'm sorry, but you have no case, John."

I was learning my perimeters with the Mir. He was glad to have me in Hunza, happy to have the dispensary. He would furnish me with

flour, hay, and other supplies at a fair price, and he would help to defend me against rumors from Gilgit. However, he seemed unwilling to control the depredations of his own servants and lumbardars, he was unenthusiastic about a craft school, and his appetite for American presents was insatiable.

The trip to Gilgit had been a complete failure. The ambassador hadn't come, so my absence from Hunza was unnecessary. Sickness had made me too weak for any useful geologic work near Gilgit. I had further antagonized the Agency Surgeon. It would take several days to recover completely from the combination of sickness and hard travel. However, I had certainly helped at the Maiun epidemic, and I still had my job to do, my loyal staff, and the stars for company.

CHAPTER VII

We Make Progress

IN early August, Hayat, Amir Hayat, little Ali Johar, and I took an overnight trip up Ultar Nullah to inspect the wildflower garden and help Ali Johar catch more butterflies. Brown Satyrids flitted through the bright sunshine in the canyon, and Ali Johar flitted after them. We stopped for lunch at the sheep camp, then pushed higher in the hope of catching some Parnassids.

Up to thirteen thousand feet the way was steep but easy. As usual, Hayat had been racing ahead, but here he stopped to wait for me. Once more I heard the cheerful words, "Take off your shoes, Sahib, you'll need your toes here!" And once more I was too proud and foolish to stop at that point. I tied my shoes around my neck and followed Hayat. He reached a perfectly vertical granite cliff with two cracks across it, stuck his fingers in the upper crack and bare toes in the lower, and started sidling across, with his whole body hanging out in space, two hundred feet above the rocks below. There was nothing to do but follow. At such times, one's toes remember old primate habits of gripping and clutching which I had supposed were forgotten generations ago. I think my little toes alone would have held my whole weight, if necessary. Hayat found the place inspiring, and sang a song of his own which went, "Vroom-a-vroom-vroom-vroom!" while he worked slowly across. I did not sing. I was so busy being scared silly and pretending I wasn't scared, that I hadn't time for song. Amir Hayat and Ali Johar followed me; they weren't scared, but neither were they nonchalant.

The bad place was only a hundred feet or so across, then the cliff ended in a steep but climbable slope. We worked up to the bare, rounded granite beside a glacier at 15,000 feet and there, between little snow flurries that melted as they fell, we caught some butterflies—blues and some small ones I didn't know. The three boys were as much at home among these wild rocks and ice as American boys in their own backyards. They even started a game of tag at the edge of a high, sheer cliff.

Hayat kept a weather eye on the sun, and shortly he announced

that it was time to go. Nobody, not even a Hunza, dares climb these cliffs after dark. We went down, crossed the bad place again, and reached the sheep camp before dusk.

"Tell these men we want to buy a sheep," I told Hayat.

"Yes, Sahib," he was all business at once, while Amir Hayat and Ali Johar hung back. He was my Number One Boy, and they must take orders from him. Hayat rejected the first sheep the herders brought and took the second, a fine young one, for twelve rupees.

We moved a little distance from the hut, which stood in the middle of a sheep cote two feet deep in smelly manure, and cooked our supper. Amir Hayat helped the herders butcher the sheep, while Ali Johar scrounged firewood from them. Then Hayat fried the liver, heart, and tenderloins in fresh butter. I had to watch to keep him from boiling them. Hunza people have so little oils and fats that they usually just sear their meat in grease, then finish by boiling. We had a very pleasant supper, crouched on a narrow terrace near our garden.

Next morning dawned blue and beautiful. After breakfast, Amir Hayat took me to see his wildflower garden. He had cultivated a little patch about twenty feet square and built a precariously balanced wall of boulders around it. Thorn brush had been crammed into all the interstices to keep the goats away. Amir Hayat kicked down a small section for a passageway, and in we went.

"Here is your garden, Sahib," he said, then stood as impassively as possible, waiting to see if I were pleased. It was quite a shock to me. He had transplanted wild flowers until the whole place was a jungle, but had not separated the different kinds. He had simply started at one end and kept planting whatever he found in the mountains until he reached the other end. The plants were doing well, but once they went to seed we wouldn't know one variety from another. Then I realized that Amir Hayat had never seen a flower garden, and that with incredible stupidity I had not taken time to teach him in detail what I wanted. The fault was mine, not his. It came from having too few hours for necessary contemplation.

"You have worked faithfully and done well, Amir Hayat," I said. "Continue to tend it, and harvest seeds for me as they ripen." I would have to teach Amir Hayat, tactfully, to assemble his wildflowers by species, in order to avoid offending him. We hurried back down to the castle before the morning warmed.

The Mir's servant arrived that afternoon with a note.

My dear John:

You told me that you are planning a trip to Khaibar to see the quartz crystals there. While you are that far, would it trouble you too much to go on to Gircha? The *lumbardar* at Murkhun reported to me by telephone that there is a dysentery epidemic at Gircha.

Yours

MD. JAMAL KHAN

I hastily scribbled in reply that I would leave tomorrow.

"Your turn for a trip, Beg," I said to the boy and watched his smile grow. "We'll take both Bili and Rani. You pack food and baggage, while I sort out medicine."

Beg trotted happily downstairs to tell Haibatullah. A minute later the two of them were busily piling up saddles, nosebags, salt, tea, spare clothes, and other necessities in the old reception room. I made up a large packet of dysentery cures and smaller ones of antimalarials, first-aid stuff, and various other things from the dispensary.

Beg and I started at 8:15 in the morning, fighting off medical patients as usual. This time we turned east, through the Altit oasis and on into the upper canyon of Hunza River. By mid-morning we reached Hamatabad Nullah, the first canyon to enter Hunza River above our own Uitar. Even this early in the day, Hamatabad was a booming, rushing grey torrent, with rocks as big as my fists tossed like leaping salmon in the spray.

"I'm no expert, but I don't like this at all," I told Sherin Beg. "What do you think?"

"Sahib, I'll go where you order me, but this place looks bad," he replied, and I knew he was no coward.

Just then he spied a faint trail that led upstream through the bare gravel to an exceedingly rickety bridge at the canyon mouth. It wasn't a proper bridge at all, just shaky poles wedged upright between boulders, with horizontal poles fastened on top and a footwalk of short boards nailed across. The whole thing vibrated with the rush of water. Bad as it was, it looked better than any of the fording places.

"You hold this silly mare," I told Beg, "while I try leading old Bili across. At least he has sense enough not to shy, and when Rani sees him go she may follow."

Bili followed me, feeling his way step by step like a cat, while the whole bridge shook under him. Halfway across, the floor-boards broke under him, and in spite of all I could do he fell twenty feet into the roaring stream. I saw the current slam him broadside against the first

big boulder and over a ten-foot fall into the pool below. Then that grand old horse got his head out of water and started to swim! He was swept over the next fall too, but he kept his head and reached a shelving rock in the pool beyond. I rushed down the bank, waded out and led him back to safety. We expected to find legs and ribs broken, but the tough old Khirgiz horse had used my bedroll, which we had tied on one side, and our packet of food which balanced on his other side, as shock absorbers. He wasn't hurt, our supplies were intact, and we lost only an hour drying out the sugar, rice, tea and bedding.

We went downstream and found a possible crossing near the mouth of the stream. I gave old Bili to Beg and rode ahead on Rani, then turned and watched him from the bank. Bili was belly-deep in rushing water, stepping on rolling underwater boulders. He and Beg were both watching the way ahead with the absolutely intent look of those whose lives depend on it. Beg knew as well as I did that one stumble and he and Bili would be washed the few feet down into the roaring Hunza River. He followed close in the way I had come. Suddenly I could see daylight beneath his horse's belly, there was a rush and a splash, and he was grinning at my side. That crossing was over!

Later there were two bad descents, where we had to ease the horses down one at a time, with Beg holding back on the horse's head while I pulled back on its tail to steady it. Otherwise the trail was not too bad, although it was certainly worse than anything between Gilgit and Baltit. We spent the night at Ghulmit, the second largest oasis in Hunza. From here on north, although we were still in Hunza, the people were mostly Wakhis, not Hunzas.

Next morning we angled slowly through the lanes of Ghulmit and its neighboring village, Ghulkin, with sick people stopping us every few yards. I had transferred some pills from my rucksack to my pockets, so I could diagnose and treat most of them without too much trouble.

A local man guided us on the abominable trail across Ghulkin glacier. We slipped and rolled, our horses fell and we wasted an hour going half a mile. Pasu Creek, with its dozen flooded channels, formed a second obstacle across our path. We reached Pasu village at two that afternoon—six hours to come ten miles, but what miles! Bili's hind shoes had pulled off crossing the glacier, but fortunately the lunbardar had some spares and re-shod him for us.

At Pasu, I found it quite disturbing, in view of the stories emanating from Gilgit, to be unable to understand what these Wakhi were saying. They gathered around the bungalow and sat chattering to each

other, pointing at me and occasionally laughing. Some stories which I knew were being repeated from Gilgit were that I was a Communist; that I was trying to undermine the Islamic religion; that I planned to capture the country; that I was trying to buy all of the land in Hunza so that the Hunza people would starve to death. All of those stories were silly on their face, but to Central Asians it was natural that a newcomer be regarded with suspicion—up here these mad ideas were active possibilities. When fifteen or twenty people sit on the porch of your bungalow all afternoon talking and you catch only every fortieth word and know they are talking about you, it is very difficult to appear oblivious; when this has been going on for months, it becomes almost impossible.

Batura Glacier lay athwart our way to Khaibar village. We had still twenty miles to go to the sick people at Gircha. Batura crossing was a famous point on the ancient caravan trail we were following. On my first trip, two years ago, it had been littered with the decaying carcasses of donkeys, horses, and camels which had slipped on the ice and died. There had been no caravans during the past year, since the Communists took over China, and only a few whitened bones stared up at us from the gravel patches on the watery ice.

Above Batura we crossed a barren ridge, then dropped into a lovely, crescent-shaped amphitheatre three miles long with a sheltering cliff to the left and Hunza River to our right.

"In the name of Allah, Beg," I asked, "why don't the Khaibar people irrigate this place?"

"No water—the river is too dangerous to ditch from because they can't control the current, and the only other water is those tiny springs at the bottom of the cliff. Not enough to raise vegetables!"

He was right, but the springs gave plenty of water for alfalfa or grass on a big scale. The difficulty lay in the fact that these people raised and cut their hay by hand, each man within his own tiny plot. They had never learned co-operation or division of labor. If I could teach them to plant the whole two or three hundred acres with alfalfa, and employ one man whose sole duty it was to tend the community field, everyone in Khaibar would be richer. They would also have to learn to let the hay stand and dry without cutting, so that their flocks could graze on it all winter. There wasn't enough snow here to bury alfalfa, and Khaibar could double its herds on this much winter feed.

This would take time, however, and my staff and I would probably have to demonstrate its feasibility on a sample plot before the local people would try it. If only I could stay at Khaibar long enough to do this!

Later I was to learn a real objection. All uncultivated land in Hunza is the personal property of the Mir. He must consent before any ditch can be dug or new land planted, and if he thinks a piece of ground is especially valuable, he naturally retains it for himself.

We passed rapidly through Khaibar village to Murkhun, where we spent the night.

Next morning I asked the Murkhun lumbardar, a small, thin, rat-faced man, to travel with me the three miles to Gircha.

"We'll have to go slowly," he said, "I'm weak with dysentery myself."

I gave him sulfaguanidine and diodoquine and we started out briskly. I showered him with questions.

"Have any people died at Gircha?"

"Oh, no, Sahib."

"Are many sick there?"

"A few, great Prince!"

"With dysentery, like yours?"

"We-ell, several of our people have malaria, and up at Raminj I understand some children have that fever with red spots. . . ." (measles).

"What about dysentery?—the Mir Sahib said you told him there were many cases!"

He wriggled in his saddle a little nervously, "Well, Sahib, you see my case was really quite bad, and I wanted to be certain you would bring enough medicine. . . ."

Would I ever understand these people? By this time we were in Gircha, surrounded by malaria cases that he hadn't bothered to mention in his anxiety to get enough medicine for himself. I exhausted my stock of atabrine on them, and was about to leave, when a farmer came to me.

"Sahib," he said, "the river is cutting away my field, and I wish you'd come and look at it." We walked through a green wheat field, spangled with yellow mustard blooms, to the brink of a raw cut-bank against which the current was pounding. Even while we watched, another chunk fell into the gray water.

"Look," I told him, "you see that gravel bar across the river? You and your neighbors start on the downstream side, and carry away boulders until you've cut a channel right across the bar. Then the water will flow in the channel and will stop cutting here." (If it had been possible to stay three days, I could have enlisted all the Gircha men and completed the job at once.)

"That's fine!" he said happily. "Please ask the Mir Sahib to order us to do it, and we will."

"Would the Mir be angry if you did this on your own initiative?"

"Oh, not at all. It is merely our custom never to do anything unless the Mir orders us."

I wonder if our medieval ancestors were as helpless as these people. The man's neighbors would not help him without a royal command because the river wasn't cutting away their own land. The fact that it would undercut their fields within five years, as soon as it had destroyed his, interested them not at all. That was fate.

With attitudes like this, and selfishness like the lumbardar's, to combat, I had work ahead for several years.

Sherin Beg and I went back to Khaibar that evening. I fought off a dozen inexperienced helping hands, unsaddled my horse, washed my hands, and while Beg cooked supper I dispensed medicine. It's amazing how far you can stretch a half-ounce of alcohol, one ounce of merthiolate, and similar minuscule amounts of other medicines. Fourteen people here were sick. I was happy in Khaibar, as always. It was a little village of no more than thirty-five families, but they were nice people and I felt at home with them. The whole village gathered at the little adobe rest hut to visit with me. Among them was the intelligent young fellow, Mohammed Hamid, who had brought me a quartz crystal to trade for a pencil when I first stopped at Khaibar two years before. He willingly agreed to lead me to the place where he had collected the crystal.

In the morning, Hamid and I climbed to a gaping fissure lined with quartz crystals. Unfortunately they were just a little below commercial size. Slightly larger, they would have been worth several dollars a pound for use in FM radio sets. However the trip was not wasted, for I had a most revealing talk with Hamid on the way down. His general feeling was: "Why should we live here like animals, half-starved every winter, when other people can learn and make things? My father is the richest man in Khaibar, and he makes about twenty rupees a year (\$6.00). Salt costs us one rupee a pau (60 cents a pound) and cloth is two rupees per guz (60 cents per yard), and it lasts only three washings. If you'll teach me, I'd like to learn to live like other people." I promised him that he could be a student in my woodcarving school as soon as it opened.

Young men like that made this project worth doing. There were one or two in each village; the problem was to find and collect them. Given two or three years' education, each could return to his home and teach his own village. This was the only way; I could see now that direct

adult education was almost impossible. Tradition had blocked the minds of the older men.

Beg and I left for Pasu early next morning, but before we reached Batura glacier, Bili started to limp with one front foot. I found that the old sore on his shoulder, which had never properly healed since I bought him in 1948, was tremendously swelled and infected. He was so weak that I wasn't sure he'd live and I felt very badly; Bili had carried me faithfully many hundreds of miles.

We left the horses at Pasu (Bili settled to a needed rest in the lumbardar's stable) and took a day's trip up Pasu Nullah, hunting for the source of some copper ore that I had found in the moraine of Pasu glacier. At nightfall we were still searching for the copper when a sudden, lowering storm forced us to make a hasty camp.

Beg brought wood and water while I started to cook. He passed the time before supper by setting fire to several juniper bushes, jumping and yelling with excitement when each flared into a very moderate-sized bonfire. It was a revelation of the utter simplicity of life in Hunza that so little a thing could arouse an intelligent fifteen-year-old boy. It also revealed the tragic lack of enough wood to build adequate fires on the entire main oasis of Hunza, Beg's home.

We returned to Pasu very early, picked up our horses and went on to Ghulmit. Old Bili seemed a little improved, but he still couldn't carry his saddle. I had learned that finding the copper would be a job requiring several days.

We treated eight people at Ghulmit oasis, then ran out of medicine. Beg did not approve of the Ghulmit people at all. As we crawled into our beds for the night, he muttered: "You carry medicine for them on your own back, Sahib, and do they thank you? Not an egg, not even a *pau* of milk do they give you!" Beg was right. The Khaibar people weren't nearly so well-to-do, and they had brought us little gifts of apricots and eggs to show their gratitude. Beg himself came of a Baltit family which was very high class but extremely poor, and he was one of the most appreciative people I ever met.

The Hunza people in general were not overly appreciative of my efforts. They were loud in expressions of gratitude, but I felt at times that they were regarding me as just another foreign traveler to yield revenue as he passed by. Perhaps the trouble lay partly in the fact that no one had ever tried to help them, and they couldn't understand my motives.

Leading old Bili, Beg and I crossed Hamatabad Nullah early in the

morning, before the melting snow could change its harmless, knee-deep trickle into the raging torrent that had hindered us before. Beg sang most of the way. He loved to tootle on his flute, or whang away at the sitar I had bought him, and now he was happy to be going home.

Near Altit we came on a small herd of sheep scattered over a rocky slope, filling the air with their gentle, discordant voices, while their hoofs whispered and clicked on the dry pebbles. Suddenly I noticed something I should have seen before—at least half of them carried the heavy, coiled horns of bucks.

"Beg," I called over my shoulder, "that flock has as many bucks as it does ewes!"

"Of course," he answered cheerily, "we always raise as many bucks as we can!"

"Why, for heaven's sake?"

"Because boy animals are stronger than girl animals, Sahib," he explained with an air of great patience, "and everyone knows that more ewes die of starvation during the winter than bucks. Lots of the ewes are pregnant during the winter, too, and then they need even more food. Much better to keep bucks!"

They had never learned to raise a breeding flock of ewes with a few bucks to service them. One lambing season in the late spring, when the flocks were entering the lush, high mountain pastures, with all but a few of the lambs butchered in late autumn, so that only the breeding flocks need be winter-fed, would be the most efficient system. These people tried to keep their flocks as big in winter as they did in summer, and butchered an animal only when it reached extreme old age. If properly instructed, they could increase their meat and manure, and keep their wool supply as large or larger, just by changing their herding practices. This would be a real improvement to all Hunza. It would cost only the time and patience needed to win their confidence and persuade them to try it.

Beg and I reached Baltit to find Haibatullah still weak and yellow from an attack of malaria, and Hayat running things competently.

My trip to Khaibar and Gircha had been a success. Aside from medical work, I had definitely removed the quartz crystals from the list of possible resources, and had demonstrated that the copper ore at Pasu must come from the upper part of the canyon. Best of all, I had two new ideas—hay raising at Khaibar and improved herding practice all over Hunza—which would benefit the whole community if I could put them into operation.

The next few days were given over to medical work. Dysentery, malaria, and staphylococcus infections had been increasing all summer, as each new patient became a center of infection. Now I was treating forty to fifty patients a day. The malaria and staphylococcus yielded beautifully to the new drugs, but the dysentery was stubborn. None of these patients died. They failed to improve for the first three days but then progressed slowly.

One of the finest things that I've ever seen in an Islamic community occurred at this time. A man brought me his wife, who was suffering from ringworm all over her chest. It was, naturally, necessary for her to strip to the waist; she dropped her shawl and removed her blouse while he looked on. I explained to them that this treatment must be repeated every day for a week, so they came again the next morning. The third day she came alone. Knowing how Muslim men feel about having others view their wives, I sent her right back for her husband. He entered the dispensary and said in bored tones, "Oh Sahib, don't be silly! We know we can trust you with our wives. I'm much too busy on my farm to come with her every day. You treat her, and it will be all right."

If this had happened one hundred miles to the south, the woman and I would both have been killed. These people were much more sensible and truly moral than the rigidly fanatic Muslims. After all, the basic reason for the purdah and heavy veils is the necessity for distrust. The Hunzas were more liberal because they were more decent and almost never unfaithful to their mates.

One of my favorite patients was Shah Begim, a lonely old lady with an infected thumb. She became a bright spot in the morning for several weeks, laughing and talking to the others at terrific speed until her turn came. Instantly she would burst out wailing, and in two minutes (I timed her) could work up real tears. One morning I laughed at her, and she broke down and laughed back, still wet-cheeked. Actually, her thumb had a stubborn, indolent gangrene that was not amusing. She was very poor, but she always brought me a ripe apricot, for a fee, which I always respectfully accepted. I like people whose pride is worth more than an apricot even when they are hungry.

Hayat was developing a real flair for diagnosis and treatment. I encouraged both boys to tell me what they thought was wrong with each patient and how the case should be treated. Some day they might have to work without me and they must learn.

By August 16th, it became necessary to travel again. It was diplomatically advisable that I cross Hunza River for a call on the Mir of

Nagir, the independent state to the south, so I decided to pay my visit, do a little geologic work in Nagir, and return to my main job in Hunza.

It was Hayat's turn for a trip. We left the castle in Haibatullah's care, with Beg to help him. We started out on foot, because there were two bridges impassable to horses ahead. Our castle clean-up man, Mubarek, was packing our baggage as far as Ganesh village where, according to custom, a Ganesh man would take it for the next stage.

At Ganesh we ran into trouble. The official wage for packing was one rupee eight annas per day. I offered two rupees for half a day's work, with no takers. All the loafers in the little village courtyard looked expectantly at a tall, dark young fellow in a rose-pink shirt who was lounging against a wall.

"Well, Sahib, what's the matter?" he sneered. "We poor people won't work any more for your starvation wages! I've just come back from being a servant down in the Punjab, and I've learned a few things! Now that Pakistan is free, you Sahibs don't matter any more, and that fat Mir of ours doesn't matter either!" He turned to the crowd of village admirers, and cried, "Make the sahib pay—he's rich! Don't take an anna less than five rupees for this work."

"When you were in the Punjab," I snapped back, "were you paid five rupees for each half-day's work?" That shut him up as I thought it would; his pay had probably been fifty a month. However, none of the village fellows would work for me.

I turned to Mubarek. "Will you pack this load to Nagir, for whatever wage I think fair?"

"Yes, Sahib."

"Then here"—ostentatiously I slapped five rupees into his hand—"is your pay for the afternoon." I turned back to the crowd. "You can all see that I pay well and am not stingy. But I will not take orders from this pink-shirted servant. Now—the nonsense he taught you has lost you a five-rupee job!"

The whole business took three-quarters of an hour, but it was absolutely necessary that I settle the issue, trifling as it appeared. Asia operates entirely by precedent, and once you yield a point you are stuck with it forever. It was rare to find such a rebellious, bitter fellow as Pink-Shirt in Hunza. I wondered as we traveled on whether this might be the first statement of a desire for change that I had faintly sensed among the younger men.

My cordial visit with the Mir of Nagir was prolonged by a whole day of rain. We exchanged gifts in traditional Asian custom. I gave him

medicine and a large colored print of a Kodachrome picture I had taken of him a year before. He gave me two flower vases which his chief artisan had made out of walnut. He was an intelligent, lonely young man whom I have always liked. This visit was socially necessary, for it must not be said that the American Sahib stayed months in Hunza and never even bothered to cross the river to visit Nagir.

He and the Mir of Hunza lived only eight miles apart and were related by marriage, but neither had ever entered the other's country. Five hundred years of continuous petty warfare between Hunza and Nagir had ended within the memory of living men, but jealous distrust continued. Nagir, on the north or shady slope of the Kailas range, was fertile and well-watered the year around, producing more than enough food for its people. Hunza, just across the river, on the southern side of the Karakoram, parched eternally in the bright sunshine and was always short of water and food. Only by stern self-discipline and hard work had the Hunzas maintained themselves as "the best people and bravest fighters in the mountains." The Nagiris, who were racially and linguistically identical with Hunza, spent their lives proclaiming "we're just as good as you are!"—which meant, naturally, that they felt they were not. It was interesting to watch how Hayat strutted in the presence of these people. As a true Hunza, he was obviously superior to them, but he felt the need to make sure that both they and I knew it.

The day after the rain Hayat and I, with a cretinoid Nagiri pack-coolie, walked the seventeen miles to Menapin where I planned to do a little token geologic work. Hayat's interests had broadened tremendously during the summer, and I couldn't explain things fast enough as we walked. He learned about the life history of malaria mosquitoes, learned for the first time that wrigglers are baby mosquitoes, that *Ascaris* worms can be caught only by eating food or water polluted with sewage, that the sky is made of air, that the sun is relatively stationary and the earth revolves, that Genghis Khan once conquered most of Asia but never came through Hunza ("He didn't dare!" said Hayat proudly), and many other things. He was fascinated, and so was I. An active, growing intellect learning the nature of the world for the first time is a wonderful thing to watch.

Our geologic work was cut in half by medical duties and all we learned was that there are no valuable minerals in Menapin Nullah. We returned to Hunza on August 23rd.

That evening I had tea with the Mir. After listening to the news over the radio, I gave him and Ayash the news from Nagir, and told

him casually about the disrespectful conduct of the pink-shirted fellow in Ganesh, including the reference (watered-down) to himself. He and Ayash stiffened a little, but said nothing. I went off to my castle after tea, hoping that Pink-Shirt would get the scolding he had earned.

Next afternoon I received another invitation to tea at the Mir's. This was unusual, two days in succession, and I went with some apprehension. He and Ayash were not at all their usual relaxed selves. No sooner had we received our tea than the Mir began to speak.

"John," he said, "I want to thank you very much for what you told me yesterday. I had that fellow up to durbar this morning, with half of the Ganesh people as witnesses, and"—his voice became taut—"you told me truth!" Suddenly his face paled with wrath.

"I showed him who is Mir of Hunza! If he loves the Punjab, let him return there. I exiled him for two years! His uncle was village chief of Ganesh until today, but he is no more! My village chiefs must love me like my sons, and no man who loved me would permit his nephew to say such things! I deposed him and appointed a man of another clan!"

I stared at him. "Mir Sahib, it was not my intention to start such trouble for you and your people!" I wished heartily that I had never mentioned the poor fellow. This punishment was severe beyond all reason, and I was directly responsible.

"You started no trouble, Sahib," Ayash Khan purred softly. "In our grandfather's day this man would have died for treason. He is fortunate to get off so lightly!"

The Mir's presumed democracy was stripped off; he was sheer enraged Asian royalty. Even as we spoke, I was thinking that if the court consisted of the village chiefs, and the Mir appointed and deposed them at will, what judgment could the court give against the Mir's wishes? In this case, which touched him personally, he never even consulted his court. It wasn't "the court exiled him"; it was "*I* exiled him!" Before long I was to learn more of this.

"My old men are good," the Mir continued, "and always consult my wishes, just like my children. But my young men all go down-country and learn bad habits from those Punjabis. Why aren't they satisfied with our own traditional ways?"

Since Hunza would starve if about a thousand young men did not go down-country to work and send money home to their families, I could understand the young men's position. Our friend Pink-Shirt had made the common error of trying to accelerate change in the wrong way, and of pre-judging me, a potential friend, to be an enemy. He had also, like

many reformers, dissipated his energies in eloquence rather than performance. This incident was a revelation of the Mir's tremendous sensitivity with regard to his dignity, and I resolved to be more careful than ever that our household pay him all the forms of respect. His flawless English and friendly manner continually misled me into the unconscious assumption that he had adopted Western attitudes with his Western dress. It is one of the most dangerous mistakes a foreigner can make in Asia, as this incident showed. Diplomats, on another level, also make this identical error, with even more disastrous results.

The next afternoon I received another shock. Three quiet, dignified men appeared on the castle roof, and spoke to Hayat at some length.

"Sahib," he reported to me, "these men are the new village chief and his brothers, from Ganesh village. They say that from now on Ganesh would like to be your *jagir*—to be responsible for supplying you with all your needs at whatever price you want to pay."

I looked at him incredulously. "They aren't angry because of what happened to that Ganesh man?"

"No, Sahib," Hayat chuckled, "they respect you greatly because you were stern, and want to show their gratitude because your action got the man his new position!"

"Tell them I thank them very much," I advised him hastily, "but that I want no *jagir*. I'll be glad to buy from them any time, at a fair price. And give them a small baksheesh, to show that I'm not angry."

They went off respectfully, well-satisfied. Sometime, perhaps, I might be able to understand these people, but I certainly was far from comprehending them now.

Altit School, where Hayat and I had delivered the pencils and paper from the Illinois schoolchildren, opened August 26th, and Hayat started at once, in the fifth grade. Sherin Beg would ordinarily have begun at the same time in the fourth grade at Baltit, his home school. However, a week before opening day he told me he did not want to continue his schooling because he was too old for his class and what could he gain from two or three more years? Could he not, instead, be my permanent field assistant? Naturally, I wanted the boy to go to school, but it was not a simple matter. Beg was an average-sized fifteen-year-old, and in the fourth grade he would be associated with nine-year-olds. I knew that I could not force him to attend for more than a year longer, anyway. Considering Beg's age, the antiquated education offered in the local schools, and the resentment toward education

which he would develop, it seemed best to let him drop out. In Asia, a boy of fifteen is expected to make most of his own decisions, and Beg had decided this, so I respected his wishes.

Hayat, who had a strong desire to learn, went happily off to Altit each morning to school. I knew, from the way he threw himself into his chores when he returned in the afternoon, how deeply he appreciated being allowed to continue his education. He was always a boy with a high sense of honor and fair play.

Meanwhile, domestic reorganization became necessary. Haibatullah was still not very strong after his attack of malaria. Since there was no bazaar in Hunza, someone must go from house to house every day to buy such odds and ends as we might need, plus staple foods. Haibatullah was a Turk, which made the Hunzas distrust him; he couldn't speak Brushuski, so he couldn't even talk to nine tenths of the farmers, and he was too weak at present for the work. We needed a purchasing agent.

In a few days we found a man from Baltit named Rachmet Ali. He seemed to be a good fellow, thin and sensitive. He had a wife but no children, was reputed to be honest and industrious, well-respected by his neighbors. I hired him for fifty rupees per month to keep us in firewood, hay, eggs, potatoes, carrots, apricots, and any extras we might require. He would live at his home nearby, and clothe and feed himself.

I now had a permanent staff of seven, plus a temporary gardener and butterfly catcher, and I had vowed to run a Western-type outfit, with a minimum of help! Of course, the chowkidar was not necessary except diplomatically; Mubarek could have done our water-carrier's job if he hadn't been away most of each day working for the Mir; and Haibatullah and the four boys were really operational rather than household staff. We had eliminated the need for a cook, cook's helper, bearer, laundryman, and maidservant, all of whom would have graced an Asian household. If the castle had been my own, we could have eliminated the chowkidar and had one man for sweeper and water-boy.

With Haibatullah to supervise and cook, and Rachmet Ali to buy, we became at last a smooth-running outfit requiring a minimum of attention from me.

CHAPTER VIII

We Have Visitors and Go Traveling

LATE in August we had a sudden deluge of guests. A British Brigadier General, chief signal officer for the Pakistan General Staff, arrived at the Mir's palace one afternoon, escorted by Colonel Ruff of the Gilgit Scouts. They had to leave for Gilgit the next afternoon, to my disappointment, because the General was fine company. On September 3rd, a British Colonel Miller arrived. He was a silent man who stayed but one night, obviously in a hurry to reach Misgar. Perhaps, as he said, he merely wished to hunt Marco Polo sheep along the Chinese frontier. In Asia one never inquires into another man's business too closely.

The same day, a tall, blondish young Englishman named Marsh arrived. He was a recent Cambridge graduate, as his accent proclaimed, and he and two friends were on a "jolly exploring trip."

"What are your plans?" the Mir asked him courteously, that night after dinner, "and where are the others of your party?"

"Well," Marsh leaned back in the Mir's overstuffed chair, "at this moment Thornely is sick in Gilgit, and Gracey is somewhere on the road between here and Gilgit with the rest of our luggage. Thornely will catch up with Gracey as soon as he's well. I thought I'd push on ahead and do a bit of reconnoitering."

"Where do you plan to explore?" I asked.

"Oh, we thought we'd go up through that place—Shimshal, I believe—then cross over into the upper Yarkent River drainage and map it—never been done accurately, you know! We'll spend the winter at Shimshal, surveying the peaks there. The Geographical Society wants us to bring out good maps and a full report."

At this the Mir and I sat bolt upright. Yarkent River drainage was all Chinese Communist territory guarded by roving bands of vicious, illiterate local troopers! Its barren, windswept, inhospitable mountains held no food and offered no place to hide. A foreigner would be killed before he had gone five miles, and diplomatic channels would never even hear of it. Furthermore, Shimshal, the penal colony of Hunza, was one of the most desolate places on earth. I knew—I had visited it once.

All winter long the clouds hang low like a freezing shroud over the village. For weeks there is no sun, and the temperature stays around zero with howling winds. Survey the peaks, indeed! Even if, by some miracle, the Communists spared Marsh and his party, they would have a hard struggle just to stay alive through a winter in Shimshal.

The Mir tactfully changed the subject, and shortly after this Marsh retired for the night. As soon as he had left the room, I turned agitatedly to the Mir.

"Mir Sahib, they mustn't go!" I said.

"They'll be killed, and stir up the whole border doing it!" he returned. "The Communists have pushed up to the head of the pass now—only thirty miles from Shimshal! Are they insane at Karachi, to let this happen? I'll call the P.A. in Gilgit at once!"

He called, and for several minutes there was a rapid-fire exchange in Urdu over the phone. Then he turned to me.

"For once all three of us agree," he said. "The P.A. has already telegraphed a protest to Karachi; now he'll telegraph one from me, too. He must have been upset"—the Mir smiled—"because he even asked me what *you* thought about it!"

Next morning Marsh came to visit me at my castle. "Oh, I say, this is really all right!" he said, as he stood in the old reception chamber gazing at the swords and glimmering brass shields. He found something new and romantic to exclaim over in every room. Finally I seated him in my office and gently explained to him the impossibility of the expedition he proposed. I told him it was death for all three of them and that the Pakistan Government would never let them proceed further. Tactfully I explained that even their physical planning was dead wrong. They had 25 horse-loads of luggage—about 3000 pounds. All this must go man-back forty miles, from Murkhun to Shimshal, and a strong man could carry only 30 pounds over the terrible pass and dangerous trail. There weren't fifty pack men, much less a hundred, available in all that part of Hunza! (This is the sort of thing that makes the professional scientist detest the "explorers" and amateurs. No advance planning, too much baggage, and an urge to have exciting adventure! Whenever an experienced field man has an "adventure," or a narrow escape, it means that he or his chief has made a stupid mistake.)

"I say, that's bad!" Marsh exclaimed. "What would you recommend?"

I advised him to beat the Pakistan Government to the punch. Once they stopped his party, I explained, it would be too late. He should send

them a telegram before this happened, telling them he had learned that the proposed trip might be embarrassing for them, and he'd like to spend the winter exploring Bar Nullah instead.

"See here"—I showed him my map—"that's just as unexplored as Shimshal, but it heads against the Karakoram range, not a Communist frontier. If you ask first, the Pakistan Government will appreciate your good judgment and will probably grant your request. But if you wait until they tell you to withdraw, they won't listen to any alternatives."

"Sounds sensible," he said. He sat there considering. Then suddenly his young face stiffened. "No—we promised the Geographical Society we'd go to Yarkent River, and they financed us on that basis. We must push on!"

"Doesn't it occur to you that the Society might prefer half a loaf to none at all?" I asked.

But he was beyond listening. "We'll get there! We'll find a way!"

My heart went out to him. Young and brave, he hadn't yet learned that even though a field man can find a way through any physical difficulties the earth may raise against him, he cannot batter down a little slip of paper issued by an official at a desk.

So Marsh pressed on toward Murkhun, trying to outrun the Pakistan Government's reaction. His party was already strung out over seventy miles, and that alone revealed that they were amateurs.

Our next visitors were old acquaintances of mine. Akhtar Hasain of the Pakistan Foreign Ministry, who had directed my Government contacts in Karachi, came to Hunza on a mountain-climbing trip. He brought with him as traveling companion my friend John Bowling of the United States Embassy. They arrived on September 6th. It was good to see old friends again, to hear news of the war and what was happening in the world, particularly in Korea. John was very happy to be among high mountains, and his grin beamed brighter than his bald head when the sunlight glanced off it as he stood on my rooftop.

"Well, you crazy Oklahoman!" I greeted him, "I'm glad to see that you haven't gone upstage on us country boys!"

"Damn Yankee!" he returned, "guys who live in their private castles have nothing to say! Man"—as he stood looking up at my white peaks—"what a magnificent place! Where were we going to climb if we'd had time?"

"You see that high needle of rock?" We turned north and craned our necks. "That's Bubelimuting. See the rounded granite knob just below its base, next to the glacier? We were going there."

Just as I pointed, an avalanche crashed onto the glacier, and the knob vanished temporarily in a cloud of pulverized snow.

"Whew!" said John Bowling, "want to get rid of me, huh?"

"Sure," I replied, and we both stood there laughing.

John asked me about the effect on the country of stopping the Central Asian caravans, and I was able to tell him how goods from Pakistan were replacing the lost Turkestani trade. We laughed together about the small annoyances, like the loss of my horse's shoes. Having someone to talk to swung these things instantly into their proper perspective.

The second installment of my funds was due to arrive in Lahore in September, and I must go to Lloyds' Bank there to pick it up. I planned a round trip of not over three weeks. I would go by horse to Gilgit, then by plane to Peshawar, and take a train to Rawalpindi. I must stop there to deliver reports on the mica, public health, and agriculture to Mr. Gurmani, the Pakistan Minister for Kashmir Affairs, then proceed to Lahore to pick up my money.

After some discussion, I decided to take Hayat and Sherin Beg with me. They had never seen a real floor, nor plumbing, nor a street, nor any of civilization. In my opinion, this trip was educationally more important than three weeks of school. Also, it would give me a chance to have a doctor inspect a stubborn spot of ringworm on Hayat's chest and check Beg's feet to see why he walked on the inside of his soles. The three of us were badly in need of a dentist. The dispensary and all other work must stop for three weeks, but there was no alternative.

The boys spent every spare minute of the last few days planning what they would buy in Lahore. Both of them visited their families the last evening in Hunza, to make final plans and to say goodbye.

On the morning of September 11th we left the castle. Haibatullah and Rachmet Ali would accompany us as far as Gilgit. We had also Rachmet Ali's younger brother, Mohammed Wali (who apparently went just for the trip), and a driver with one pack donkey. I let Sherin Beg ride Rani through his home town of Baltit. She was the finest, most spirited horse in Hunza, and he kept her prancing. He was as proud as an American boy driving his father's new Cadillac.

Four miles from home we met Gracey, the second of the three young Englishmen bound for Shimshal. He was trying to catch up with Marsh, and my outfit was equally eager to reach our destination, so we exchanged a few words and passed by. Two mornings later we met Thornely,

the third Englishman, on the road a few miles this side of Gilgit. I was surprised that the Pakistan Government hadn't yet sent the inevitable telegram recalling them.

The morning of September 18th was the big day for my boys. The tickets and travel permits finally had been secured, and we were leaving by plane for Peshawar. We rose at dawn, gulped a little breakfast, and hurried to the airfield. The boys were both trying to be calm, but obviously couldn't stand still. At last the plane (a loaded freight plane) was ready. We were the only passengers and we sat on bunk-style seats which hung from the wall of the fuselage.

The plane warmed up, pulled slowly to the end of the airstrip, and surged into its take-off run. Both boys turned pale. Hayat clutched his seat strap, and Beg sunk his fingers into my arm, muttering "*Mera dart bhot hai!*" ("My fear is very great"). Just as we left the ground Hayat's seat collapsed, rolling him onto the floor. His face showed that he thought we were about to die, but he uttered no sound. As the plane rose smoothly into the sky they began to feel easier, and soon were staring out the windows at Nanga Parbat, and craning to look at Gilgit River, far below.

Unfortunately, Beg began to feel airsick when we struck the bumpy winds over Chilas, but Hayat was more thrilled every minute. "Why does it look as if we're going slow? Why can't I see the propellers go around?" Questions came faster than I could answer them. As we lowered toward Peshawar, a military pursuit plane whizzed by us, and Hayat's face fell. "That one's going faster. Why doesn't our pilot hurry up? Well, if that one's faster, it's better, just like with horses."

We landed at Peshawar in the blazing heat and an Orient Airways truck whisked us to Dean's Hotel. All three of us were in spotless suntan khakies, and as we stepped into the wide, low-ceilinged lobby we caused a little stir. No one could figure us out! I was obviously American, but Hayat and Beg weren't Westerners, yet neither was their appearance exactly Asian. We walked self-consciously up to the desk.

"Ah, Doctor Clark," said the assistant manager, "glad to have you back! We can give you neighboring rooms—Numbers 20, 21 and 22. Boy!" A uniformed Pathan took our luggage, and led us to our three suites. Dean's Hotel is all one-story. Like a great barracks, comfortable small bungalows adjoin each other. Each "room" is actually a sitting room, bedroom, and bath, with entrance from a long veranda. Our turbaned bellboy deposited us in our respective suites, but he was scarcely out of sight when both boys hurried in to me.

"All right, Sahib!" Hayat said accusingly, "Now don't be mean! Show us how to use all these things!" So I introduced them to electric lights and switches, washbowls, faucets, and flush toilets. They almost pushed the light switch off the wall. The toilet completely charmed Sherin Beg.

"*Khoda-ka mehrwani!*" he said, "Why couldn't we have a spring like this in my father's field? Much better than an irrigation ditch. Only pull—and water comes!"

They also appreciated bedsprings and overstuffed chairs, but most of all they liked the smooth, hard floors and walls, so different from the rough, dark, packed-earth rooms they knew. I finally calmed them down enough to wash for lunch.

When we entered the big dining room the impact of all the alien sophistication hit them, and they stiffened with shyness. As the head-waiter seated us at a table with snowy linen and an array of silverware, I heard Hayat whisper to Beg, "Remember we are Hunzas! Keep your back straight the way the Sahib taught us!" They looked down at the line of forks and spoons in despair. I whispered, helpfully, "Don't worry—just let me go first and you use whichever one I do!"

Never have I eaten a meal where my every move was more closely watched. We ate a silent lunch, broken only the first time the tall, dark, handsomely uniformed Punjabi waiter bent over Sherin Beg and murmured, "Would the young Sahib like some fish?" "*Bop-eree-bop!*" ("Goldarn!") said Sherin Beg and took a modest helping. Their manners were instinctively good. They sat straight and handsome, and I was as proud as if I had been their own father.

On the way back to our rooms after lunch, Sherin Beg kept murmuring, "'Would the young Sahib like some fish'—to *me!*" Over and over. Once inside my room, Hayat gave Beg an exaggerated salaam, and said, "If the mighty Maharaj would like a raisin, I'll get him one!"—then ducked and ran.

That afternoon we went for a short walk in the Suddar Bazaar, the fashionable shopping district. The boys' eyes almost popped out. Beautiful silks, brassware, automobiles, guns, alarm clocks, furniture, bicycles—all new to them! I had to be continually on watch, because they would stop in the middle of a street to look at something new, and Peshawar drivers heed no pedestrians. As the marvels of civilization, Peshawar brand, impressed themselves on him, Hayat became suddenly defensive.

"Anyway, my Hunza has better drinking water and a cooler climate!" he snapped at me, apropos of nothing.

"It certainly does, Son," I soothed him, "and better people, too. Anyone can make a living here on the soft plains, but it takes a Hunza to conquer your mountains."

We went to a movie that night. This was a mistake, for the boys were in a daze; they had simply seen too much to marvel any more.

The afternoon train next day bore us to Rawalpindi. We trotted rapidly through the autumn dusk of Pindi's shady avenues in a hired tonga—a two-wheeled pony cart. Just as we reached the portico of Flashman's Hotel, a car pulled up and out stepped Akhtar Hasain and John Bowling. Akhtar Hasain was staying with friends in town, but John Bowling and I took a double room, while Beg and Hayat shared a neighboring one. The boys and John grinned at each other like the old pals they already were. At dinner that night he muttered to me "Hunzas in a swank hotel! Fifty years ago they would have been out raiding Baltistan. Clark, you're ruining Asia!"

Early next morning, September 20th, John left with Akhtar Hasain on a trip to Natiagali. I went to visit the headquarters of the Pakistan Ministry for Kashmir Affairs, which was here in Rawalpindi. The entire Gilgit Agency had recently been transferred from the jurisdiction of the Ministry for States and Frontier Regions to that of the Ministry for Kashmir Affairs. This pleased me very much because the Honorable Minister, the Nawab Mushtaq Aftal Gurmani, had befriended and assisted me last spring in Karachi. My technical reports were to be sent directly to him. Two were all prepared now, one on public health measures and one on improvements in the horse-transport system, which I wanted to give him. I was under a friendly cabinet minister, and was eager to co-operate.

The joint secretary of the ministry, Mr. Mohammed Ayub, met me with apologetic courtesy. Mr. Gurmani, he explained, was very busy at present. I might see him when I came back from Lahore in five or six days. If Mr. Gurmani had even a few minutes free today, Mr. Ayub would call me at my hotel.

On my way back to the hotel I arranged air passage to Lahore for the next day. Originally we had planned to go by train, but a great flood had stopped all rail and bus traffic between Rawalpindi and Lahore. We flew over plains that were one broad lake, with trees and crumbling huts protruding like incongruous islands. Village after village stood half-collapsed in the muddy, mirror-still water. The only movement was near the main stream-courses, where destructive currents still cut fields, trees, and adobe houses away.

This whole area was geologically a down-warped trough, without sufficient gradient to hasten the water to the sea. Any unusual monsoon, like the one this September, was bound to flood it with mud-laden water from the Himalaya. My realization of the geologic inevitability, however, did not lessen the grief and loss of the individual villager nor the damage to Pakistan. I tried to teach Hayat a little of this, but it was still beyond him. Both boys enjoyed this plane-ride. Beg had recovered from his sick spell, and the plane was a comfortable passenger type with up-holstered bucket seats, not like the rattletrap freight on the Gilgit run.

We took a taxi from the airfield into Lahore. The boys' unconscious assurance was beautiful to watch as they walked between the porch columns and into the cool, high-ceilinged lobby of Faletti's Hotel. Lahore was the finest, most cultured city in Pakistan, and this was its best hotel; but they were at home now in civilized surroundings. A quiet dignity they always retained, but fear was gone.

That afternoon the boys and I bought a good 35mm. camera which the Mir had asked me to get for him, then went shopping for American-style milk shakes. A very expensive confectionery store on the Mall advertised ice cream and sodas, so in we went. It was like an old-fashioned American drug store: dim and cool, with little marble-top tables and metal lyre-back chairs.

"This is just like in America?" Hayat asked as we gave our order.

"I hope so," I replied. The waitress returned shortly with three tall glasses foaming full. Both boys energetically sucked their straws, then came up for breath.

"They're all right, but I don't care too much for them—too sweet," said Sherin Beg.

"I think," Hayat murmured, his eyes half shut with pure gastronomic delight, "that I could eat nothing but these for the rest of my life!"

Lahore celebrated a great religious holiday the next day, so we could do no work. We spent most of the morning visiting the beautiful Badshahi Mosque. In the afternoon we went to the zoo. As we entered the shady park, Sherin Beg became really interested. Usually he was content to let Hayat take the lead, but not here. The roars of a maned lion drew him first, and he stood spellbound until the great white teeth snicked shut and the rumbles subsided into coughing grunts. Then he turned down a flagstone walk and stopped, entranced. A peacock was strutting toward us! His eyes shone, and he stood absolutely silent until the great bird settled again. Then he sighed and led us from one caged bird to another, stopping only at the brightly colored ones. All his life

he had been starved for beauty he hadn't known existed, and now he was finding it. We stayed in the little park until closing time.

The holiday over, Lahore opened for business as usual. I took the boys to the United Mission Hospital at Foreman Christian College. For the first time they saw a sanitary, well-managed hospital. The people there, especially Dr. Vroom, the superintendent, were all very friendly and interested. They advised arch supports for Beg's feet, and told me that my treatment of Hayat's skin trouble was the proper one (it dried up and healed a month later). We agreed that my dysentery was nothing but an American gut sorely aggrieved by chapatis adulterated with sand and horsehair, and they gave me a soothing medication for it. I also produced a limerick on the subject, which they were kind enough to enjoy:

Small but vicious enteric bacteria
 Are roaming about my interior,
 And numerous worms
 With wiggles and squirms
 Proclaim my intestines inferior.

We would have to go elsewhere for our dental work, because the hospital had no dentist. Later, an Armenian in Rawalpindi filled our teeth.

The boys then went out on their own to buy some of the things they wanted for their families, while I visited the bank. The draft had arrived. Within an hour I had eight thousand rupees in small bills, done up in a large parcel. I had to carry back mostly one-rupee notes, because it was often difficult to change even a single rupee note in Hunza, or a hundred-rupee note in Gilgit. The size of the bill one can change is a sure index of the wealth of the community. Entire districts in Hunza could not change a bill for thirty cents.

That night I had dinner with Dr. Vroom (whose family was vacationing at Murree for the summer) and a very charming, elderly missionary couple whose name I have forgotten. It was such a blessed relief to be with people who had experienced the same hopes and problems I was facing. Relief accelerated my never laggard tongue, and I heard myself going on and on. Those kind, patient people let me talk them half to death.

On the 24th we tried to make plane reservations back to Rawalpindi and discovered that there was no plane service. The only available plane had been laid up for periodic repairs. We were told we must go 693 miles around the flood by train, first south to Lodhran, then west to Multan and north again. Unlike American railroads, the Northwest Railway

seems to hold its passengers personally responsible for floods, and we had to pay full fare for the detour trip, ninety-three rupees each instead of fifteen.

We spent the few hours until train time at the zoo. The boys were not contemplative—things seen yesterday no longer interested them. One lion roared again, which pleased them, and we found some hyenas we had missed before. My limited Urdu was inadequate to explain to them that the hyenas, civets, and cats are members of the *Aeluroidea* because they lack the alisphenoid canal and have the twelfth cranial nerve emerging from the *foramen lacerum posterius*; so I just said, "They are of one family."

We left Lahore at nine in the evening and reached Lodhran Junction at 6:00 A.M. The train from Lodhran to Multan and Rawalpindi wandered in three hours later; luckily we had a half-sized first-class compartment all to ourselves. All day our train ambled amiably across the desert, stopping frequently for long periods at stations where dense hordes of people had gathered on the platforms. We arrived at Rawalpindi at 3:45 on the morning of the 26th, tired and very grimy, and moved into Flashman's Hotel again.

Mr. Gurmani, I learned at the Ministry for Kashmir Affairs, was sick and couldn't see me. I decided to wait over until the next day in the hope that his health would improve. The boys and I went to the dentist, and bought hand scales, emery cloth, two more mosquito nets, and various small tools for the woodcarving school.

Mr. Mohammed Ayub, the Secretary of the Ministry, was courteous but definite when I called the next morning. The Honorable Minister might be sick for many days. I expressed my regret at his illness, and left my reports on public health and horse transport, plus one on agriculture which I had managed to finish en route.

It was disappointing not to see Mr. Gurmani. He had expressed keen interest in my work last spring, and with him in command I had hoped that the whole attitude at Gilgit would change. It was most important to keep him fully informed of my operations and plans.

The midmorning train from Rawalpindi landed the boys and me in Peshawar by early afternoon. We registered at Dean's Hotel for the two- or three-day wait for a plane, and found to our surprise that our next-door neighbor was John Bowling. He had suffered a recurrence of his malaria, which left him a yellowed wreck of his former self, and he was still too weak for the return trip to Karachi.

John and I sat on the hotel lawn and visited next day while the boys

went shopping. They had their pay for September and October, plus a bonus I had given them, so they were well-equipped financially. A tonga drew up before us in the late afternoon sunshine and disgorged two very happy boys with a great mound of stuff. Once inside my room, they were all eagerness to show me everything.

"Look, Sahib, at this beautiful brass water pitcher!" said Sherin Beg.

"And this one—what is the gray metal it's made of?" Hayat held up a large pewter pitcher.

"What in the world are these for?" I asked, pulling four gaudily painted, round wooden bed legs out from under the heap. Sherin Beg proudly explained that no one in Hunza would have a bed so fine once a frame of poles was made and strips of canvas laced back and forth for the "springs."

They had dishes, and bright cloth for their women relatives, and sturdy cloth for their fathers' clothes. Sherin Beg had even bought a little plastic top for his six-year-old brother.

We flew back to Gilgit on the morning of September 30th, under a brilliant blue sky. Haibatullah was waiting for us at the airfield, with a weird, dog-shaped sorrel gelding I had never seen before.

"*Salaam alaikum*, Sahib," he called happily, as we approached. "Look what I bought for us—to alternate with old Bili on your long trips."

"Well done, Haibatullah," I approved. "How much was he?"

"Only two hundred rupees. He's old now, but everyone says he was a great polo horse when he was young. His name is Kashgabei (White Diamond Brother)."

As we walked toward our headquarters, with Kashgabei carrying our luggage and two happy boys getting acquainted with him, Haibatullah turned to me again.

"There's a message for you, Sahib," he said. "The P.A. sent word several days ago that it was very important for you to see him as soon as you return."

I left the others at our headquarters and walked on up the shady lane to the P.A.'s house, wondering what could be so urgent.

CHAPTER IX

Fight for Survival

HELLO, Clark, back from your trip, I see!" the P.A. called jovially from his table in the shade of the big tree. "Come over and sit down, please." Never had he seemed happier or more friendly.

I relaxed in an armchair and he turned to me briskly.

"There's a little matter of government business," he smiled, "the Ministry for Kashmir Affairs notified me a week ago that your three-months' permit to remain in the Gilgit Agency has now expired. I am to ask you please to leave as soon as possible—certainly within a week!"

"Wha-at?" I was stunned. "I just *came* from the Ministry for Kashmir Affairs and they never mentioned it to me!"

"Well, I have my instructions from them to that effect," he rejoiced in his triumph. "When can you leave?"

"P.A. Sahib"—I was too dazed to think, but the strength of my purpose carried on for me—"my permit says nothing about a three-months' limit. I want a written note from you, for my Foundation's records, that my 'three-months'' permit has expired. I also want a permit to fly to Rawalpindi at once to interview Mr. Gurmani."

"Certainly, certainly! I'll have both delivered to your headquarters this afternoon. There's no plane tomorrow, so you can go out the next day. Goodbye, Clark!"

I walked back to my headquarters hardly knowing where my feet took me. So he had won! All our plans were for nothing. What would become of Hayat and Beg and Haibatullah? What would become of all my Hunzas? For that matter, what would become of me? For the first time in my life, the answer to that last question was of no interest. When I told the boys about it, Sherin Beg didn't quite realize the implications of the whole thing, but Hayat understood and he looked as sick as I. The next day we stayed at headquarters. I tried to plan an approach to Mr. Gurmani, but could think of nothing useful.

On September 2nd I flew back alone to Peshawar, leaving Hayat and Beg in Gilgit with Haibatullah. I hoped to catch the Mir of Hunza (who was vacationing down-country) and John Bowling in Peshawar,

to enlist their aid in a plea to Mr. Gurmani. But when I arrived I found that the Mir had left for Swat State and Bowling had gone to Karachi the day before. So I was alone. (All the timing on this desperate trip went wrong.) I telegraphed the news to the Mir. He returned to Peshawar on the 4th. He could do nothing to alter a Pakistan Government decision, but he was my most reliable friend and I wanted to talk it over with him.

The next day I went by train to Rawalpindi. It was hard to believe, as I stepped into the lobby at Flashman's Hotel, that the three of us had been here, so full of happy plans, just a few days ago. Mr. Ayub of the Ministry for Kashmir Affairs informed me that Mr. Gurmani had gone to Karachi. Another case of bad timing!

Mr. Gurmani was the only official with power to change that expulsion order, so I had to see him. This meant a trip via Lahore to Karachi.

There were still no planes out of Rawalpindi, the railroad had reservations for several days ahead, and I was lucky to get on the bus to Lahore. Mr. Gurmani had recovered from his sickness with phenomenal speed, I reflected, as the rattletrap bus carried me slowly across the flooded plains east to Lahore.

At Lahore I must wait four hours for the train to Karachi. I spent the time visiting Friedl Peter and his sister Ilsa. They were Swiss, and were running a project somewhat like mine. Wise, kind, wonderful people, they listened sympathetically, then gave me sound advice about practical things I could do to increase my chance of being able to remain.

Once in Karachi, I revised my plan. Why not make an appeal direct to Mr. Mohammed Ali, the Secretary General of Pakistan, who had approved my whole project last spring? Next morning I wrote him a long letter, describing exactly what had happened. I reminded him that my original permit had certainly not been limited to three months, or I would never have gone up to Hunza in the first place. I explained to him that I could scarcely consider this good faith on the part of the Pakistan Government, to permit an American charitable foundation to undergo heavy expense, then summarily order it out in three months. I also made it clear that if my Foundation or I had offended the Pakistan Government, a statement of our offense would be appreciated; but a curt order to leave, without stating cause, seemed unjust.

I delivered the letter to the Secretary General's office, then returned to my hotel to wait the long day out.

At 8:30 P.M. a telephone call came.

"Dr. Clark?"

"Yes, sir."

"Mohammed Ali here. I just received your letter of this morning. So sorry it was delayed by the press of other business. In this matter, Dr. Clark, I really must refer you to the honorable Mr. Gurmani, whose jurisdiction now includes the Gilgit Agency."

"Yes, sir, but—"

"I would advise you to get in touch with him at once, Dr. Clark, *at once!* He is due to leave for Rawalpindi and Natiagali tomorrow morning, and I am sure he would be pleased to interview you before he leaves, to save you inconvenience. Goodbye, sir."

"Yes, sir, thank you, and goodbye." I turned away from the phone, having just died again. What possible good could it do to see Mr. Gurmani now? If the order were changed, would not the Secretary General have told me?

Ten minutes later I sat up with a jerk. It might not help, but at least I could try. I scribbled a note to Mr. Gurmani at once, requesting an interview, and delivered it by taxi to his Karachi residence.

The hotel telephone was ringing as I re-entered the lobby. Yes, Mr. Gurmani would be happy to see me at 10:30 this very evening!

As I stepped into his luxurious living-room, he half-rose from the davenport and extended a pudgy hand to me. He was a squat, dark man with a broad smile.

"Dr. Clark, so glad to see you! Please excuse my not rising. My foot—sprained it, you know. That's why"—with an ever-wider smile—"I had to miss the pleasure of a visit with you in Rawalpindi two weeks ago. So nice of you to call this evening! Is there anything I could do for you?"

"There certainly is, sir! Could you please explain to me the reason for this order expelling me from the Gilgit Agency without warning? Could you please explain—" in sudden rage I was waving the P.A.'s order in his face. I saw his eyebrows go up, and took a quick grip on myself. One does not shout at a cabinet minister.

"Order? I don't remember an order regarding you!" he said calmly, as he took the paper from me. "Oh—this is signed by the Gilgit P.A., not by my ministry. Must be some mistake. Yes, yes, I'm sure that's it—one of the clerks has made a mistake and confused you with someone else!"

"Undoubtedly sir, just an unfortunate clerical error," I agreed enthusiastically.

"Now let's see—what to do about it?" his eyes sought the fireplace, in thought. "I'll tell you—meet me at my office in Rawalpindi in a day or two, and I'll straighten it for you up there."

"Thank you, sir," I said as calmly as possible. We chatted for a few minutes, then some friends of his arrived and I bowed myself out. A reprieve had come! A reprieve, but from now on my stay would be always uncertain. That didn't matter, I told myself as I tried to sleep that night—just a little added nerve strain. But I could stay for a while, treat my patients, start my craft school, hunt for minerals, do the work my whole life had fitted me to do.

Now the trip went into reverse, like a stunt sequence in a movie. The long train ride back to Lahore, a day spent in Lahore waiting for reservations, again a visit to my friends the Peters, a day-long trip in the rattletrap bus, and Flashman's Hotel in Rawalpindi that evening! By the time I arrived in Rawalpindi, the Kashmir Ministry had closed for the night. The watchman told me that Mr. Gurmani was leaving for Poonch the next morning. Was I to spend my life following Mr. Gurmani?

I had evolved a new plan during the trip back, and meant to present it. The following morning found me at the door of the Ministry office, waiting for it to open. One of the first to arrive was Mr. Mohammed Ayub, the Joint Secretary. I was shown into his office at once. No friendly smiles this time—his thin, nervous face was as taut as a striking hawk.

"Dr. Clark," he said sternly, "it has been decided that you will be permitted to return to the Gilgit Agency, at least until Mr. Gurmani's visit to Gilgit in two weeks. We thoroughly approve of your geologic research—that is, your hunting for useful materials. We prefer, however, that you terminate your—ah—social efforts and activities."

"Very well, sir," I answered. "Social activities" could only mean the dispensary and craft school. "I shall certainly be available to the Honorable Minister when he arrives in Gilgit. Meanwhile, I have a request to make, for the benefit of the Pakistan Government."

"What is that, Dr. Clark?"

I explained that I had already learned a great deal about the geology of the Gilgit area. It would require a heavy expenditure of time and money for one of their geologists to acquire the same knowledge independently. I therefore suggested that the Pakistan Government send one of their geologists with me for a few weeks. They would pay his expenses, naturally, but I would show him all I knew, and save their

Government thousands of dollars and months of time. I handed him a written copy of the request.

"Dr. Clark," he said, his own decent personality breaking through his official veneer, "that is an exceedingly gentlemanly offer, especially at this time. I shall certainly recommend its acceptance."

Our positions forbade that we be friends, but at least we parted with mutual respect. This plan would give the Pakistan Government sound reason for letting me stay at least a few weeks more. It would also mean that I would be under constant observation by a brother scientist. His reports on my activities would certainly be read with more attention than the views of office-bound politicians in Gilgit. As I went out through the anteroom, I met the two young Britishers, Marsh and Thornely, coming in. Their trip had been cancelled, as I had warned them it would, and they also were suppliants to Mr. Gurmani.

I now had only two weeks in which to find mineral prospects so impressive that Mr. Gurmani would let me stay in Hunza in order to have the prospecting continue. At Peshawar came another delay—I must wait until Saturday for the next plane to Gilgit. My two weeks was cut to ten days!

On October 21st I finally returned and hurried down the lane to my headquarters. Three whole weeks had been lost, but I had won a reprieve.

Hayat, Beg, and Haibatullah were standing inside the gate to receive me, their faces grimly prepared for the bad news they expected.

"We stay!" I burst out. "At least for several weeks, and by that time I will have found a way to make it longer."

"Fine!" said Sherin Beg, with a broad grin.

"Sahib," Hayat asked, his face still worried, "this means that we can go on—but we'll never be sure how long, will we?"

"That is so, Hayat," I said. He followed me across the little court and into our main room. "From now on," I continued, turning to him, "we must learn as much as possible, and work as hard as we can. But we must also have fun doing it, in order to keep up our spirits. Do you understand?"

"If you say so, Sahib," he replied, a little relieved. "Now let's eat!"

So eat we did, the chapatis and mutton that Haibatullah had prepared for us.

CHAPTER X

Prospecting under Pressure

WE held a staff conference immediately. We had to decide every move very carefully; a single mistake might ruin us now. After several suggestions, including Beg's happy idea that we start a revolution, we finally settled down to a clear plan.

Haibatullah and Hayat would return to Hunza within a day or two, as soon as they had given me whatever assistance they could. This would get Hayat back in school; he had already missed six weeks. Haibatullah would be in charge of my affairs in Hunza, if any situations arose.

Sherin Beg would work as my field assistant, the job he had preferred to school. Beg and I would spend most of our time in Dunyor Nullah, a big canyon that entered Gilgit River from the north just four miles east of Gilgit. On a one-day reconnaissance trip there a year before, I had seen traces of copper, magnetite iron, and pyrite, so it was the most hopeful place nearby. Actually, the idea of trying to discover a valuable mineral deposit in ten days was sheer desperation. In systematic prospecting, I should first have performed a geologic survey of the whole region. This would automatically determine which local districts were most hopeful. Then an intensive search should have been made of each of these favorable spots. A good geologist could have done it in a year. But ten days, in an area geologically uncharted! I would have to use every short cut, every trick, follow every faint suggestion that twenty years of experience had taught me.

Meanwhile, I would write reports for Mr. Gurmani on every conceivable mineral resource, because politicians love reports even more than they love results.

Dr. Gratias, a young Danish doctor in Gilgit on a short visit, had supper with us that evening, and arranged to go part way up Dunyor Nullah to see the mountains next day. I planned to enlist the help of Rahabar Shah, my Hunza friend at Dunyor to whom I had given vegetable seeds, on this trip.

Dr. Gratias arrived punctually at dawn. Gilgit bazaar was an avenue

of sleeping shops, their umber doors and shutters battened tight, as we passed through. *Gratias* and I walked, while Hayat rode Rani, and Beg straddled the luggage on Kashgabei, our new horse. Beg's skinny gander-shanks could stretch wider over a packed horse than one would believe possible.

We travelled three miles up the main trail into the morning sun. Where the trail turned north toward Hunza we struck on east, down a gravel bank to the edge of Hunza River. Here we unpacked, and Hayat rode back to Gilgit leading Kashgabei.

A small, ramshackle raft ferried us across to the Duniyor side, and we went on to the house of Rahabar Shah, near the upper end of Duniyor oasis. His nephew in Gilgit had forewarned him that we were coming, and he was ready for us. He led us to a table and chairs waiting under a great mulberry tree. The mountains loomed almost within reach on our left and the green fields and orchards of Duniyor stretched away two miles in a gentle slope to our right down to the raw, tan desert along Gilgit River. No matter how pressing our affairs, the social amenities must be preserved. Rahabar Shah was a leader in Duniyor. Our visit brought him great honor, and if we had stopped without accepting his hospitality he would have lost face.

He served us an appetizer of tea and fresh fruit, followed by an excellent chicken dinner. Rahabar Shah had for many years been cook for a British official. He had saved money and now he was a gentleman of substance himself, proud to be host to foreign visitors.

After lunch he showed us his twelve-acre farm, unquestionably the most progressive in the Gilgit Agency. In a country where the rest of the people were farming by the methods their ancestors had used three thousand years ago, Rahabar Shah had a nursery and an experimental farm plot. The American vegetable seeds which I had given him last June were doing very well. He had grafted all of his fruit trees, and raised apples, pears, peaches, plums, almonds, apricots, mulberries, grapes, sweet lemons, pomegranates and one dry, pithy fruit, the size of a wild plum, which I did not recognize.

It was not surprising that an intelligent Hunza like this could outdo his lazy Sheena neighbors. I couldn't help wondering why he didn't develop his land up in Hunza and live there rather than enter voluntary exile here. (Later I was to learn why. If he lived in Hunza he would have to work part of each year, without pay, as the Mir's cook.)

After the agricultural tour we started north up Duniyor canyon,

Rahabar Shah's cretinoid hired man carrying our bedrolls and Beg and I packing our loaded mountain rucksacks. Rahabar Shah wouldn't think of missing a trip into the mountains, so he came along. By mid-afternoon we had covered several miles. Dr. Gratias had to leave us here, in order to get back to Gilgit by nightfall, and the rest of us climbed on up the precipitous canyon.

We hoped to reach the trio of shepherders' huts called Murkui by evening, but the day was too short. Darkness closed in on us in the canyon and we camped on a gravel bank. Rahabar Shah had brought only one blanket ("Hunzas don't feel the cold, Sahib!"), so Beg lent him half of his, and the two of them slept inside our little mountain tent. I slept outside under a bright, frosty moon.

We reached Murkui early. It was a wide spot in Dunyor canyon at an elevation of about 7,500 feet, inhabited by three Sheena goatherds and their flocks. It was an excellent place to camp, with clean water, plenty of juniper for firewood, and the goats as a source of food. Rahabar Shah bought flour, a goat, fresh milk, and butter from the herders, and obtained permission to camp in a small, abandoned rock hut. Even with these jungley* folk, it was necessary to sit down, drink milk or clabber with them, and palaver a while before talking business. Buying the goat, for instance, was a forty-five-minute job which required the consumption of two pots of tea. The uncleanliness of those huts was beyond description, but I had grown accustomed to hair in the chapatis and sheep dung in the butter, so I visited unperturbed except by the loss of time.

While Rahabar Shah made camp, Beg and I started up Murkui Nullah, a tributary canyon entering the main Dunyor Nullah from the east. As we climbed, I taught him to recognize magnetite iron ore. Up we went, led on by occasional pebbles of pure ore in the stream bed. At the forks we separated; he followed up the south tributary while I took the north. When we met again at the fork, he reported no iron in his nullah. I sent him back to camp to rest and help Rahabar Shah with supper. Then, guided by I know not what, I turned and climbed through the dusk up his canyon. It looked as if Beg were right about the iron, but around the first sharp turn I came on what he hadn't noticed because I hadn't taught him—copper. A great vein of it made a green-and-blue streak across the dark mountain face. I scrambled up the crumbling schist slope to reach it, falling and banging my knees as I did so. I collected some representative samples before the gathering night forced

*jungley—a hill-billy, an uncivilized person without manners.

me down again. Now we would see what Mr. Gurmani had to say about my usefulness in the area!

The copper was excellent, but where had those pebbles of iron ore washed from? Next day I followed higher up the north fork of Murkui Nullah. It was a cold, beautiful day. I climbed the nullah bed over ice-coated boulders until I reached a falls, then scrambled about eight hundred feet up the steep canyon wall to a little buttress. Here lay a good trail, which led higher yet, out of the junipers into a beautiful, open pine forest and finally, at the very top of timberline, to an abandoned shepherd's hut. Patches of last year's snow filled all the shady hollows, but the bare, uncompromising schist ridges sulked dull green in the bright sunshine. Evidently there was no iron ore below the permanent snow at 15,000 feet. The sun was very pleasant; I sat on the bright side of a wind-gnarled shrub to eat lunch.

I returned to camp early and found that Rahabar Shah and Beg had killed one *chikkor* (a little red-legged partridge) with our .22. They roasted it on a spit to make a delicious kabob. The two months of good food down-country, plus the excellent food Rahabar Shah was cooking, had replenished my reservoirs of energy and I felt strong without a twinge of heart pain. It was wonderful to be able to work to the limit of one's muscular strength again.

I had now prospected out the area directly east of us. To the northeast some big veins made rusty streaks across the lighter cliffs; they were logically my next objective. The next morning I showed them to Beg and asked him to pick a trail to them. As usual, he did an excellent job. He led me up the bottom of a steep tributary nullah for about one and one-half miles, scrambling over boulders and climbing up small ice-coated waterfalls. We climbed out of the canyon across a very steep face of loose cobbles and greasy clay, a thousand slippery feet above some rock ledges. At the top we came to steep slopes which Beg, a true mountain boy, referred to as *Maidan*—plains—chinked with boulders, grass tufts, and small pine trees. Here we ate lunch, washed down with melting snow, then walked the last hundred yards to the vein. We followed it a quarter mile, cracking off samples every few yards, but could find only pyrite, and not even pure pyrite at that. (Pyrite, or iron sulfide, can be used as a source of sulfur, but it must be very pure and in large masses or it does not pay to mine.)

Beg called me over to the edge of the cliff and showed me that we had climbed up in a spiral. I peered over. Half a mile directly below us was the canyon mouth we had entered this morning. Beg found an

excellent goat trail down the cliff face, which saved us hours on the return trip.

A second day with negative results! Geologically, of course, the one good copper prospect was more than adequate reward for the week's prospecting, but Mr. Gurmani was not a geologist. If possible, I must overwhelm him with a veritable Golconda. The only hope of doing so lay in continued systematic prospecting of this zone of veins. I must not let desperation push me into hasty excursions following hunches. East and northeast of Murkui were now prospected out. As I was prospecting a great circle around our base, the next logical place would be directly north, up the main Dunyor Nullah.

Next day I went alone to another vein which streaked the canyon wall several miles to the north. It was a beautiful morning, with blue sky overhead and Rakaposhi Peak brilliant white at the head of the nullah. I followed a dim ibex trail through little patches of open pine woods; the last mile was across open boulder fields in the nullah bottom. The first vein was impure pyrite. Two more, invisible from our camp, transected the cliffs a mile further up the nullah, but they also proved to be valueless. A third day gone! However, several tributary canyons entered the main one here, and a rich vein might be up any of them. This would be a good place to camp after I finished the remaining area around Murkui.

On my return I found Beg and Rahabar Shah busily roasting two odd-looking birds, but no feathers were in evidence. Their faces were much too innocent as they served me a well-browned drumstick.

"What kind of bird is this?" I asked suspiciously.

"Eat it, Sahib—it's a big kind of partridge!" urged Sherin Beg.

I took a bite. It was tough, but otherwise not bad. Beg and Rahabar Shah silently worked away at theirs, but at the fourth bite Beg suddenly choked, then burst out laughing. "Sahib, Sahib, it's red-billed raven, not partridge! I didn't get any chikkor today, but I thought maybe you wouldn't notice. You're eating a crow!"

I laughed, too. Those poker-faced partners of mine had certainly taken me in. We all finished our helpings—there wasn't any other meat, so why not? Later I heard Beg whisper to Rahabar Shah, "See—I told you the Sahib wouldn't be angry! Even if he is worried, he always laughs at a joke!" There are times when a boy's faith holds a man to a very high standard of conduct.

Beg and I hiked west from Murkui the following morning, up Barit

Nullah. Chikkor and rock pigeons were thick at the mouth of the nullah, and Beg looked at me piteously.

"O. K!" I said, rather crossly, "You stay here today and hunt, while I go on up the nullah, prospecting." We split our lunch and I went on alone. Beg was a very gentle, sensitive boy, and I think he hunted in order to avoid my nervous irritability. The threatened collapse of my whole project and the continued pressure of this trip were making me so disagreeable that I wondered why Beg endured it. My harshness was endangering the whole sense of equality that I had carefully developed within him and Hayat. In the presence of Rahabar Shah he always acted like my servant, as a matter of custom. Now I was hurting his feelings when we were alone and he was beginning to fear that he was no better than a servant in my eyes, too.

I wasn't alone long. Two little goatherds, bright-eyed brown monkeys about ten years old, left their herd and joined me for the day. They spoke only Sheena, but they were good company. We divided my lunch three ways, and as we ate they admired my hand lens, hammer, and compass. They left me on the way back when I turned up a side ravine to look at another vein. Again, it was only pyrite.

I had now prospected a day's climb in all directions from Murkui; we must move in order to work further. Our new camp, four miles north, was a little shelter of logs, in a pine woods at about 11,000 feet, with patches of September snow lingering in all the shadows. After a hurried early lunch I followed the lateral moraine of Dunyor glacier about two miles up toward Rakaposhi. A fine big eagle circled me, but decided I wasn't edible and went on his way. There were also a few crested chickadees, some magpies, several red-billed ravens, a rusty roustabout water ouzel, two or three kinds of eagles, and one rare but very beautiful little black and white bird that I could not identify. The ridge of barren moraine gravel overlooked the black, hackled ice of the lower glacier and faced the green, pine-clad slope of the main ridge, while Rakaposhi towered overhead like the gleaming white wall of Paradise. I was savoring every moment of this trip with the knowledge that it might be my last chance to live in these beautiful mountains.

I saw nothing new except another pyrite vein and the mouth of a side canyon to prospect tomorrow. Back at camp I found that Beg had gone out hunting while Rahabar Shah began cooking supper. Beg returned at dusk because at this elevation it started to freeze as soon as the sun set. We crowded so close to the fire that Rahabar Shah could scarcely move around his cooking pots. That night we all slept cold.

The steep climb east up the side canyon in the morning sunshine thawed me rapidly. The first couple of miles were easy, then trouble began. I tried two routes which ended against vertical cliffs; a third suddenly developed into a wild scramble across a loose clay-and-boulder face. My feet were slipping at every step, and I couldn't stop or turn back or I would have hurtled down the whole way. On reaching solid rock again I lay for a moment panting, thinking what a silly, dangerous thing I had just done. From there on I followed a glacial moraine up to a vein at snow line. More pyrite.

From the ridge where I stood, I could see the whole upper basin of Dunyor Nullah. Everywhere I looked everything was either covered with snow, or had already been prospected. I had definitely finished the reconnaissance of this canyon, and we might as well head back for Gilgit tomorrow. The one copper prospect and the yet-unlocated iron were more than any geologist could expect from a week's work in this country, but it still was not all I had hoped for. It was good, but I was not sure that it would be enough to swing a decision in my favor.

We broke camp next morning in a snow squall, and moved back down the canyon to Murkui. I spent the afternoon writing up field notes and preparing reports for Mr. Gurmani. The following day we went out to Dunyor, and from there Beg and I hurried back to Gilgit. Haibatullah and Hayat had left days ago. As we hiked up the lane, we found a note tacked to our outer gate:

Dear Dr. Clark:

I am temporarily at Gilgit dak-bungalow, and would like very much to see you, if I may.

GRACEY

So the three Britishers weren't yet out of the Agency! I went at once. Gracey was sitting disconsolately, surrounded by all the packing cases, saddles, rifles, and other impedimenta of their expedition. I told him about my temporary reprieve, and asked him if they had been granted one also.

He said no, that Mr. Gurmani had refused them permission. However, they had another scheme. What did I think would happen if they didn't leave as planned? Suppose they cut off eastward toward Astor and climbed Nanga Parbat without permission—what could anyone do about it?

"Oh, no!" I hated to discourage him again. "In the first place, man, there's a military guard on the bridge at Bunji which no one can pass

without a permit. The trail is full of officers traveling between here and the Kashmir front. You'd be questioned every mile. In the second place, it's already November and you're talking about climbing the most dangerous high peak in the Himalayas. Thirty-two men have already been killed trying to climb Nanga Parbat in the summer! With a full expedition and forty coolies you *might* make 18,000 feet. With the outfit you have, 15,000 will be dangerous at this season."

"Well, I suppose you're right," he said sadly, "I suppose we ought to drop it."

A little later I mentioned how eager I was to get back with my Hunzas. Gracey gave me an amused smile.

"What's funny about that?" I asked.

He chuckled. "When I was in Hunza those villagers were all the time asking me when 'our American' would be back!"

So I was winning those stiff-necked, silent people, after all! I returned home greatly heartened. I was helping my Hunzas, they liked Americans, and they wouldn't soon forget us. If my luck held, I might still be of real service to them.

I spent all the next day finishing my reports for Mr. Gurmani. The first report described the copper and iron in Duniyor Nullah, with rock samples to demonstrate it. Another outlined my plans for future prospecting, carefully arranged to give me a maximum of time in Hunza without seeming to do so. I knew that most Asian technical men accomplish only about half as much per day as American scientists, so I planned what would have been a full program for a Pakistani geologist. By working at maximum efficiency seven days a week, I could thus win half time for my medical, agricultural, and craft school work.

Last came a very carefully worded report—possibilities of placer gold in the area. A little placer gold had been recovered from these streams for hundreds of years by small families of wandering Yaghistanis and Sheena. I suggested that I run a systematic survey of the placer situation in all the streams, with recommendations for recovery. The glamor and direct value of gold attract even the steadiest heads; they might well sway a politician's decisions.

Mr. Gurmani and his party weren't due for two more days, so I took a quick trip up Jutial Nullah, three miles below Gilgit. I had already reported on the rich pyrite vein there, but a few demonstration specimens might be useful. At Jutial Village (built on the alluvial cone at the mouth of the nullah) a light-haired boy about fifteen years old came out to greet me. This was Suleiman Khan ("King Solomon") whom I had

met at his father's tailor shop in Gilgit. He had asked me previously if he could join my woodcarving school when I started it, so I told him to come with me. This would be an opportunity to talk with him and learn if he would be a boy worthy of encouragement.

The day was cloudy and raw. Skifts of dry snow pellets scurried around us as we climbed up Jutial Canyon. The trail was steep but easy up to the place where the vein cut across the mountains. This pyrite was sufficiently massive and pure to become a profitable source of sulfur, if there were enough of it. I collected some brilliant, brassy-yellow chunks, and we dropped back half a mile to a spring to eat our lunch. We had a careful discussion of Suleiman's future while we ate. He was tremendously respectful, as a well-trained Hunza boy should be, but he retained his dignity and showed no servility. He impressed me as being quiet, honest, and sincere, just the type I wanted for my school. As we went on down to Jutial, I told him that he could become a student if and when classes started.

Beg was waiting for me at our gate.

"Sahib," he said, "Gurmani Sahib and a great many other Sahibs came on the planes today, and are at the P.A.'s house."

"Did they send a note or a message here?"

"No, Sahib."

"O.K., Beg," I told him, "they're probably resting from their trip. I'll go up tomorrow and visit them." The time of final decision was at hand.

CHAPTER XI

We Win Our Freedom

THE P.A.'s servant ushered me directly into the big dining room, where Mr. Gurmani and his party were having breakfast.

"Ah, Doctor Clark, how nice of you to come so early." Mr. Gurmani hailed me with a smile, while the P.A., from the head of the table, made a feeble attempt at cordiality. "Do sit down with us! Had your breakfast?"

"Yes, thank you, sir," I said, as I slid into a chair.

"This is Mr. Mueen-ud-Din, the Political Resident." At Mr. Gurmani's nod a tall, exceedingly handsome man rose and shook hands. "Professor Anwar Beg of Islamia College, Peshawar, whom we all remember with affection." A small, lively, elderly gentleman bobbed up irrepressibly and twinkled across the table, "And our reliable Chief of Kashmir C.I.D." A great, flint-eyed hulk of a man surveyed me unsmilingly, as if I were a bug beneath a lens.

So Mr. Mueen-ud-Din was to be Political Resident, the real authority to whom the P.A. must report! I had heard of him as a wealthy, powerful man, beholden to no one. I knew that he was not a politician. His would be the real deciding voice in my future. I looked at him closely, and liked what I saw: intelligence, firmness, and common sense.

As soon as breakfast was over, Mr. Gurmani, Mueen-ud-Din, and I went into a side room "for a little chat." My pack of specimens was waiting beside a chair, where the servant had placed it.

"Now, Doctor Clark," Mr. Gurmani said brightly.

"Here is iron ore," I told him, laying each heavy, gleaming specimen on a low taboret between us. "And here is copper ore, and here is pyrite, which may be used as a source of sulfuric acid." He took them from me happily, and he and Mueen-ud-Din inspected them closely. I showed them how the magnetite pulled my compass needle.

"And here are my reports." I handed them to him.

"Thank you so much," he said, "now tell me; what are your plans for the future?"

"Well, sir, with your permission I'd like to continue with my geologic survey."

"By all means!" The black, heavy iron ore and glittering pyrite had obviously impressed them.

"I understand that a young Pakistan geologist has arrived to accompany me," I continued. "Then also, if possible I would like to continue my first-aid work for those sick people who live too far away to reach the Agency Hospital."

Mueen-ud-Din remarked that such a service would help to increase the stability of the area. The first of my "social experiments" was approved!

"I'd also like"—this I brought out hesitantly, indeed, remembering that my next "social experiment" had been specifically forbidden—"to set up a little woodcarving school and factory and to continue raising wildflower seeds for sale in America."

"Certainly, certainly—no harm in that!" Mr. Gurmani agreed heartily. They had approved every point, and I was free again! I held my face taut, to keep from showing obvious jubilation.

"By the way, Dr. Clark," Mueen-ud-Din was turning the mineral specimens over and over as he spoke, "do any of these come from places near Gilgit?"

"Yes, sir," I assured him. "The pyrite is only six miles to the southeast. A jeep road goes half way, and the rest is an easy trail."

"Could you take me today?" he asked. "Having been educated in Switzerland, I'd like a little walk in mountains again. I'd also like to see whole rocks of this brassy pyrite."

Here was a beautiful opportunity to acquaint Mueen-ud-Din with my project! During our trip together, we might work out a co-operative effort for the benefit of Hunza, and I need no longer be on the defensive.

The P.A. was summoned, and a great bustle of luncheon preparations and jeep loading ensued. Professor Anwar Beg bounded in through the midst of the scurrying servants. He was coming along, he announced. He wanted mineral specimens for his chemistry classes. "Dr. Clark will be able to tell me what these things are!" he beamed at us.

"Of course you're coming," Mueen-ud-Din smiled. No one could refuse Professor Anwar Beg. His shrewd kindness and genuine enthusiasm had made him a beloved teacher for thirty years.

Anwar Beg and I sat in the rear of the first jeep, while Mueen-ud-Din cramped his long frame into the seat next to the driver. Behind us came a second jeep bearing the lunch, a servant, and three Gilgit Scouts

to act as guards. We rolled gently down the lane to my headquarters, paused while I picked up my hammer and coat, then putted cheerily through the gray November morning to the mouth of Jutial Nullah.

It was an afternoon to remember. We talked about Switzerland, skiing, mountain climbing, the mineral prospects in the area, the human resources of the Agency, and all the things that men of similar tastes and different backgrounds find to discuss. Mueen-ud-Din was visibly impressed by the pyrite locality. He also observed, without comment, that I was working very hard by Asian standards, that the minerals were at the places I said they were, and that I was not living a life of luxury—Beg had stuffed a couple of chapatis and some dried apricots in my pocket for lunch.

As we walked back down the canyon that afternoon, his casual references to “you’ll be able to prospect higher when the snow melts back,” and “I’d appreciate your views on water supply for power, next summer,” made me feel that my future was assured for many months. I might even be able to stay out a year more as I had planned—and in a year anything might happen.

That evening I attended a formal dinner in Mr. Gurmani’s honor. After dinner, he introduced me to Mr. Puri, a likeable young chap who was joining the P.A.’s staff in order to gain administrative experience. Then he presented another young fellow known as Qadir,* the geologist who was to accompany me for the next few weeks. Qadir seemed nervous and jumpy. He could not, he said, be ready for field work during the next two or three weeks.

We finally decided that Qadir was to open up the pyrite prospect at Jutial and the copper prospect in Dunyor Nullah, take samples for assay, and make an estimate of tonnages. Meanwhile, I would go to Pasu in upper Hunza and try to find copper there before winter closed in. I was to return to Gilgit in three weeks, meet Qadir, and the two of us would travel together for a month or more. I would guide him to the pyrite locality tomorrow, before I left.

The next day Sherin Beg had breakfast ready and a lunch packed by dawn. He had become a first-rate camp assistant, and he took great pride in doing things with quiet efficiency. We were really camping rather than living here at headquarters. There was no furniture; our bedrolls were laid on the plank floor, and we cooked and ate squatted by the tiny fireplace at the end of the dingy room. Beg kept the place

* Not his real name; all other names in this book are actual.

neat and the dishes washed, bought groceries in the bazaar, and did any errands I assigned to him. He spent those days when I had no need of his services in the hills, visiting with his older brother Mirza, who clerked in a Turki shop near Gilgit bridge.

After breakfast, I sat and waited for Qadir. He didn't arrive. At 8 o'clock, I went to the house where he and Puri were staying, and found him dressing. Puri, who was to come with us as a guest, had already finished his breakfast and was waiting. After Qadir had eaten, the three of us started on foot for Jutial.

I pointed out the salient geologic features as we went. Puri asked several intelligent questions about the soils, crops, and general way of life, but Qadir was silent, evidently gathering steam.

Suddenly he burst out, "You understand, my Survey regards these mountains as a last priority for search! There are no mineral deposits up here."

I replied mildly that I didn't know the area had ever been prospected. At this, he fairly sputtered with excitement. For political reasons, it was undesirable that the place be developed; even if I showed him a vein of pure gold three feet wide, he would send a negative report to his Survey. Shades of all the scientists who ever worshipped objective truth!

"Mr. Qadir," I said sternly, "I am not a politician, nor are you supposed to be. It is our business to report but one thing: how many tons of ore of what richness are available. Let the politicians make political decisions!"

Puri courteously drew attention to the scenery at this juncture, and we climbed on up the nullah. I learned that Qadir was in his early twenties, with an M.A. (equivalent in years of study, but not in qualifications, to our B.A.) in geology. Judging from his observations along the trail, his university does not teach a course in elementary geology.

Qadir was slight and nervous. He appeared to be painfully defensive, and over-aggressive because of it. I still had hopes that he might develop into a good field colleague if he were given encouragement, so I told him about the iron-ore float that we had found in Murkui Nullah. I lent him my field map of Duniyor Nullah, showing him where the iron-ore boulders were and the area of not more than two square miles from which they must be coming. This gave him a wonderful chance to succeed where "the American" had failed. If he could do that once, his added confidence might make him easier to live with. I had hoped, of course, that they would send me someone who was both pleasant, like young

Mr. Puri, and a competent geologist. Such a man would have become the Pakistan Geological Survey's expert on this mountainous North, to his professional advantage. And I would have profited by having his accurate reports of my activities going to the Pakistan Government.

We looked at the pyrite vein, then climbed down to Jutial and walked back to Gilgit late that afternoon.

Beg had hired a donkey, a pack-horse, and two drivers to help us carry all our stuff to Baltit. Suleiman Khan, my craft-school recruit from Jutial, showed up at daybreak along with the pack-men. I had Beg and Suleiman go on ahead with the outfit, while I finished errands. I would then catch up by riding old Bili. Haibatullah and Hayat had taken our other two horses, Rani and Kashgabay, when they went up to Hunza.

I first bade a friendly farewell to Mr. Gurmani and his staff, then sent a birthday cable to my father, left my forwarding address at the Post Office, and had my shoes repaired. Bili and I left Gilgit at noon and we caught up with our plodding caravan at 2:00. From Nomal on, I let Beg and Suleiman take turns riding Bili, while I walked. My health was good, and the exercise kept me warm in the cloudy winter days that had closed around us.

We swung around the last ridge at Murtzabad on November 8th, and saw the white walls of my castle glimmering through the gathering dusk four miles away. Home at last, and free to continue my job after two months completely lost! We hurried on, but it was dark when we reached the castle.

Haibatullah and Hayat came out into the courtyard to help us, both of them strangely subdued. As we unsaddled by flashlight, I asked Haibatullah if everything was all right.

"Sahib," he replied, "a very bad thing has happened! I told Hayat not to ride the horses when he took them to water, but he has been doing it anyway. He did it today!"

Hayat stood before me with his face taut and his fists clenched.

"That was very disobedient!" I said primly, wondering what lay behind their visible tension.

"Yes, Sahib. But today Rani was excited, and when he took her to water she reared and fell over the cliff and broke her back."

"Good God—with Hayat on her?" I exclaimed. "How did he escape?"

"He jumped off just as she fell, and managed to catch himself at the edge and climb back up. But Rani is still alive, Sahib. What will we do?"

There was only one thing to be done. I told Haibatullah to bring me my pistol and three rounds.

"Must you do this tonight, Sahib? You're tired; you've just walked fifty miles!"

"Never mind—bring the gun and flashlight, and send Rachmet Ali or Beg to guide me." I paid off the pack men, sent Suleiman down to his uncle's house in Baltit, then I stood in the dark waiting.

When Hayat saw the gun he began to sob. He had loved Rani and he knew how we needed her. Beg and Rachmet Ali guided me down half a mile of terrace walls and footpaths to the spot, and I put the poor horse out of her misery.

Hayat cried quietly most of the evening, because Haibatullah had scolded him and because he knew he had failed me. At last I called him to me.

"Now, Hayat," I told him gently, "we all make mistakes, and you made a bad one today. Remember, I know you couldn't help what happened to Rani, and I'm not blaming you for it. I'm only glad you weren't hurt, my son. I'll trust you just as much in the future as I have in the past."

Then he really broke down, as I knew that he must if this thing was to be lifted from him, and sobbed as if he couldn't stop. He was the proud type of boy who resents punishment, but gives an overwhelming response to gentleness.

CHAPTER XII

Recruiting for the School

HUNZA had been dark green with late summer when we left. Autumn had passed while we fought for survival down-country, and now winter was upon us. The pale drab fields and grey mud huts lay as open and barren as the raw rock cliffs above them. The apricot orchards in the hollows were gnarled thickets of sooty black, and the tall Lombardy poplars along the ditches stood like whitened skeletons against the rolling clouds.

The rooftops of Baltit were bare and silent, with faint curls of light smoke wafting upward from the smoke-holes here and there. People went outdoors only when necessary, wrapped in their long white woolen cloaks. The whole oasis seemed dead, reverting to the barren desert slope it once had been.

The Mir and his family had moved to Ghulmit oasis, twenty-three miles up Hunza canyon, for their annual winter stay. As there was not enough wood at Baltit to keep the palace heated throughout the winter, and Ghulmit still had abundant firewood, the Royal Family spent two months there each year, ostensibly to hunt, but actually to keep warm.

Our castle was bitter cold. We couldn't keep a fire burning all night. The wind whistled through the broken window panes which Hayat and I had started to mend but never had time to finish. Although I was wearing woolen underwear, wool shirt and trousers, a sweater, and my sheepskin, I was still too cold to sit still. The first job was to make the place warm enough to enable us to work in some comfort. Hayat and I brought out the mica we had collected last summer and set to work. With a little practice, we learned to split it thin enough so the pieces could be stapled together. In two days, we made window panes to fit all the gaping holes in the castle windows. We were notably warmer—at least the cold air no longer blew in about our ears.

Meanwhile, our household reorganized for winter. Haibatullah prepared meals in the old-style Hunza room, so that one fire would serve for both cooking and heating. I moved my bed in, too, but Haibatullah and the boys insisted they were still warm enough outside on the roof.

They certainly had better air. Smoke from our little fire hung thick in the room, since considerable cold air blew in while little smoke ever found its way out. Old Nasar moved his bed from the castle roof into the dark bowels of the castle. He spent most of his days in his son's warm hut down below, in Baltit.

I had expected to start the craft school in September; here it was mid-November and all I had were tools and good intentions. We needed students, a teacher, a building, and wood for carving.

I had planned to stay in Hunza and do the teaching myself, but that was now impossible. Mr. Gurmani's Kashmir Ministry had given me permission to run the school and dispensary, but outlined with me a heavy geologic prospecting schedule. By operating as efficiently as possible, I could save about half time for the school, but no more. To accomplish even that, Beg and I would have to travel thirty-five miles per day instead of the usual fifteen or twenty.

I knew that four Hunza men had learned some carpentry from the British in years gone by. Three of them were now working full time on the Mir's new palace, but the fourth, Mohammed Rofi, was unemployed. I sent Rachmet Ali to fetch him from his home in Baltit, and in a few minutes a wheezing from the stairwell announced his arrival. I looked up from stapling a mica window pane as his shadow blocked the light of the old reception-chamber door.

He was mussy and he slouched as if his sixty years rested too heavily on his shoulders. His eyes, red-rimmed with trachoma and bleary with cold, were set in a weather-beaten, sagging face.

"*Salaam alaikum*, Sahib," he wheezed hesitantly.

"*Wa-alaikum Salaam*, Mohammed Rofi! Do you want a job?"

"Yes, Sahib!" No doubt about that, at least.

"All right, Mohammed Rofi. I'll have several boys here within the next few days. You are to teach them carpentry. This will be about two hours' work daily, and I'll pay you thirty rupees per month. Is that fair?"

"Yes, Hazoor."

I told him that we'd try the arrangement for a month or two. He assured me that a relative of his, in Altit, had some big planks sawed out of a mulberry log which could be used for practicing carpentry.

"Good!" I said. "Tell him to bring them here."

"Yes, Hazoor, tomorrow," he answered happily.

"No, Mohammed Rofi, this afternoon," I retorted briskly. I was determined not to let the school become a "do-it-tomorrow" proposition.

That afternoon a mousy little donkey staggered into the castle yard

under two great planks. These were maneuvered up the stairs and laid on the roof. The surface was weatherbeaten, but a scratch with my knife revealed beautiful golden mulberry wood, open-grained like oak and almost as hard.

Now we had tools, wood, and a teacher of doubtful value, but we needed students and a place to work. I had decided to select the one or two brightest boys from each oasis. When they had learned to produce salable woodcarvings, they could return to their homes and teach their own neighbors. Later they could act as district supervisors for a home carving industry. I hoped that it would operate somewhat like the Swiss system of cottage crafts. Unfortunately, every Hunza man seventeen to twenty-one years old was down-country, either in the Pakistan army or working, earning money for his family. So I would have to start with younger boys.

It was necessary to go up to Pasu again, to scout for the copper ore Beg and I had hunted last summer. I had promised Mr. Gurmani that I would try to find it before the winter snow came too low in the mountains. This trip could serve a double purpose, hunting copper and selecting schoolboys from each settlement we passed through. Beg was my regular field assistant, but Hayat came to me the evening before I left, and said, "Sahib, who can tell how much longer you can be with us? I learn many things from you that our school couldn't teach. Let me come with you also, and go to school again when we return to Baltit." What he said was true, so I gave him permission.

We left Haibatullah at the castle and started off toward upper Hunza. Kashgabay was carrying our packs, while the boys took turns riding old Bili. I walked, in order to observe the rocks and to keep warm. The Mir and Ayash welcomed me at Ghulmit that evening, openly delighted that I was able to stay in Hunza.

We reached Pasu by noon the next day and here I divided forces. Hayat would stay to guard our luggage. Beg and I would go on across Batura Glacier to Khaibar, pick up that young fellow Hamid for the school, and come back tomorrow. If Hayat found any good, intelligent boy who wanted to join our school, he was to have him ready.

Beg and I crossed Batura without incident. In the summertime, when the heavy gravel of the trail slipped on the wet, melting ice, one always breathed a sigh of relief if no horse fell. Now the ice and gravel were frozen dry and gave solid footing.

As usual at Khaibar, the whole village came to welcome us. The schoolmaster took our horses to a closed stable. Here at almost nine

thousand feet it was too cold to leave them out all night. Everyone in the village tried hard to make me care for my horses according to their customs, but I resisted. They shared with the rest of Hunza a number of superstitions:

1. Horses should be tied very tightly with their heads held high so they can't possibly bring them down to a comfortable position.

2. No matter how cool the horse or warm the place, never unsaddle for two or three hours after you stop.

3. Always give a horse hay first, then barley.

4. Always give a horse barley first, then hay.

5. A horse should never be fed or watered until he urinates. He may have done it a hundred yards before reaching the stop, but that doesn't count.

6. (*and most important*) Sahibs who own horses know nothing whatever about them; any Hunza who never owned a horse knows all about them.

7. The throat strap of a bridle should be pulled at least as tight as the belly cinch—who ever heard of a horse wanting to breathe?

8. It doesn't really matter how a pack is arranged or fastened; it is the will of Allah that all packs fall off, and who are we to dispute Allah?

9. Let a bridle lie on frozen ground all night, then jab the icy bit in the horse's mouth. If it sears his tongue, he's a sissy.

10. Horses should always be watered before they are fed.

11. Horses should never be watered before they are fed.

As we stabled the horses, the schoolmaster turned to me.

"Sahib," he said, "the whole village knows you want Hamid, but would you consider my younger brother, Burhan Shah, also? He's a good boy, Sahib, and we come of a good family—our father is a brother of the lumbardar, so we are cousins of your Sherin Beg. He is sixteen, Sahib, and has gone as far here in school as he can."

I asked to see the boy, and the schoolmaster led me to his house. A middle-aged man who had been sitting wrapped in his choga by the tiny fire rose hastily to greet me; obviously this was the father. A strong-looking boy was standing in the shadows bashfully trying to hide one foot behind the other.

"*Salaam alaikum*, Burhan Shah," I said, "come here."

He murmured the inevitable "*Wa-alaikum salaam*," shuffling forward but looking me straight in the eye the whole way.

"Do you want to come to Baltit and learn to make things in my school?"

"Oh, yes, Hazoor!" Eagerness made him forget a little of his shyness, and his dark face shone.

"Good! Sit down and we'll talk about it." The four of us sat close around the fire. Burhan's father asked me carefully what the boys would eat, what bedding I had for them, what clothing I would supply, and would I let them go to their own prayer house. The answers satisfied him. I explained that the boys would attend regular school in Baltit, and my craft school after hours. Then he asked, "How much salary do you pay, Sahib?"

"This is a school, not a job!"

"Nay, Sahib," he answered firmly, "this, my oldest son, is a school-master, so I know what schools are—they teach things out of books. You talk of making furniture and other things to sell—that is a job. It is right that the boys receive pay, even though it should be very small because you are feeding and clothing them so well."

I thought fast. This man wasn't trying to exploit the school—he believed what he said. Also, I liked the care with which he had questioned me about Burhan's future, and I liked the intelligence of the whole family.

"Very well, sir," I answered, "I'll give ten rupees (\$3.00) per month salary, and when they have learned to make things that will sell, they can have all the profits."

"That is very fair, Sahib," he said. "Come tomorrow morning and I will give my son Burhan into your keeping."

I returned to the rest cabin, and found Beg and a stranger sitting before the little fireplace awaiting me. He introduced himself as Hamid's father. He was a fox-faced, evasive fellow who never thought to ask me about the treatment Hamid would receive. Hamid, he said, was at Chapursan, thirty miles away, arranging his marriage, and couldn't come for a week or two because of that. Why did the boy want to learn new ways? This life was a good one. Anyway, he'd send Hamid as soon as he returned. When I mentioned ten rupees per month, his eyes lit up. It was evident that he was opposed to all of this except the money. I remembered how eager Hamid had been to get away from just such attitudes as his father was displaying, and vowed to myself that I would fight as hard as necessary to help the boy.

When Beg and I stopped at Burhan's house in the morning the father conducted a leave-taking ceremony. He took a bowl of flour and threw a pinch of it into every corner and at every point in the room where an upright supported a ceiling beam. Then he put a pinch on my hat and

on each shoulder, and likewise on Burhan's hat and shoulders. He then kissed Burhan on each cheek and on the backs of his hands. Burhan respectfully returned the salute, they murmured "*Khoda Hafiz*" (God accompany and protect you), and Burhan was in our keeping.

This ceremony carried us back to before Islam, before China, even before Egypt, to the dawn of civilization. Burhan's father had used flour, sacred because it was the foundation of life, a gift of the gods and spirits to feed men when hunting failed. He threw it to each corner to propitiate the household spirits who lived there. He put a pinch on our heads, the home of our souls, and on our shoulders, the seat of our strength, to bless our lives with the protection of his household gods. In this fashion Isaac may have given his blessing to Jacob when that young man left the family tent.

Sherin Beg spent most of the ride back to Pasu pointing out to me that his second cousin Burhan wore his hat like a jungley, had jungley clothes, and jungley manners. Burhan bashfully tried to find things to do to show me his gratitude. High over the trail loomed Karun Pir, and in spite of my recurring dysentery I spent most of the way admiring it. Of all the mountains in the world, it is the most magnificent, rugged and inaccessible.

At Pasu we repacked and bought a goat costing forty rupees, twice what it was worth up here. The man who sold it to me had received free medicine for his whole family on previous trips, but the idea of reciprocity simply did not occur to most of these people, unlike Burhan's family. To them, "Sahibs" were of a different world.

From Pasu I went up into the mountains next morning to look for the copper vein from which the ore pebbles on Pasu glacier were coming. Although the nights were bitterly cold, the days were warm as long as the sun shone. We camped two nights on the north side of the canyon, at fourteen thousand feet, prospecting up the long ridge until we met snow, then spent two more nights on the south side. I found small pebbles of high-grade manganese ore, and followed them up the mountainside until the snow stopped me again. Climbing in tight, bulky clothing over slippery boulders hidden under three feet of loose snow was almost impossible, and the snow concealed the ore pebbles.

Then we tried to go up the canyon, following the copper float. Crevasses cut the glacier into impassable cracks and pinnacles, and the canyon wall was a vertical cliff, which left only the moraine ridge, lying between the cliffs and the ice, as a possible route. It consisted of large, precariously balanced boulders, each of which had to be negotiated in-

dividually. Often our weight would dislodge half a dozen ten-foot ones, which would grind and crash fifty feet to the ice below. After struggling for half an hour to make four hundred yards, we gave up and returned to camp. Both the manganese and the copper were already covered with snow. I had kept my promise to Mr. Gurmani, however, and would try again next spring.

Tea, made by the usual Central Asian recipe, was our inspiration and beverage. To a large pot of water we added a small handful of tea, which we then boiled briskly for several minutes. Then milk was added—we had powdered milk, but sheep, cow, goat, yak, or horse milk were usual—and a large lump of salt. The mixture was boiled until the milk made it froth up. This we drank unsweetened, and ate the sodden leaves when we had finished the tea. I never understood why this was customary, unless it was to get the last of the salty taste. Naturally there was no flavor left in the tea leaves.

The return trip to Pasu was very easy, climbing downhill with packs lightened by the four days' food we had eaten. At the rest hut we found bad news. Pale with rage, Hayat told us that during his absence a thief had entered, strangely enough without disturbing the locks on door and window, and had been at our luggage. A hasty check revealed that most of our sugar and tea, all of the cough pills, and my surgical scissors were gone. The food didn't matter, of course, and I had plenty more cough pills at Baltit, but the thief had taken my only pair of surgical scissors. Their loss would seriously hamper the minor surgery I had to do almost every day in the dispensary. Only the lumbardar had a key, so anyone else would have been forced to break a lock to enter. I had always believed this lumbardar was a man I could trust. It seemed to me that my judgment of these people was proving extremely unreliable.

I told the boys that all we could do was ask the Mir to try to get the scissors back, and dismissed the matter. Then I asked Hayat if he had located a prospective woodcarver in Pasu.





"Yes, Sahib, just a minute and I'll bring him." Hayat ran out the door and returned leading a small, hazel-eyed, ratlike fifteen-year-old whom he presented to me as Nasar Mohammed. I disliked the boy at first sight. However, the other boys strongly approved of him, and Hayat's judgment of Hunzas was usually better than mine, so I questioned him carefully. His answers indicated a firm desire to try, and I decided to give him a chance. He tossed a small bundle of clothes on Kashgabai and we started down the barren trail toward Ghulmit, a cavalcade of two horses, four boys, and a man.

We arrived late at Ghulmit. That night I explained to the Mir how much I needed my surgical scissors, and asked him please to try to recover them for me. Once more he said there was no conclusive proof. There was, I knew, enough circumstantial evidence to justify the Mir bringing quiet pressure to bear. But if the scissors were returned, I wanted no public trial and disgrace for the Mir's official.

Next day I had the Ghulmit lumbardar announce, town-crier fashion, to the whole oasis that I was hunting for woodcarving students. In the morning, two applicants showed up. (Later I was to be swamped with more than a hundred boys who wanted to join; now it was too new an idea, and few cared to venture.) The first was a black-haired, hatchet-faced boy named Leman Shah. He strode into the rest bungalow, his long wool cloak wrapped about him against the bitter gray day, and grinned at me impudently, as I sat Buddha-like on the floor. I snapped questions at him without disturbing his aplomb. I liked his spirit, but my four boys were scowling.

Finally Hayat broke in. "There's another boy here, Sahib, who'd like to join your school." A skinny, blonde boy whose cloak scarcely reached his knees slid through the door, gave me one terrified glance and leaned back against the wall, staring fixedly at the floor.

"What's your name?" I asked. An unintelligible mutter. From behind me, Burhan Shah spoke up: "His name is Nur-ud-Din Shah, Hazoor. He comes from Kermin in Chapursan, close to Afghanistan and Russia. His mother is dead. His father and brother are in Kermin and he is here with an uncle." Then in an eager rush, "He's a good boy, Sahib, I know him, and he comes of a good family."

I showed the two boys how to use pencil and paper. Then I said, "Draw me a design—just something you think is pretty." Leman Shah promptly drew this:  Nur-ud-Din Shah drew this:  then developed it to  and finally to , with a piteous trembling in his hands.

Leman Shah's drawing showed aggressiveness, a sense of symmetry, and absolutely no artistic abilities. Nur-ud-Din had started out with a good idea and two good lines, but then fear overwhelmed him and he lost both artistry and judgment. I was all for Leman Shah, but my four boys rose in violent revolt. He was a bad boy, they said. He came from a bad family, and if I took him they'd beat him up and force him to leave, and so on. They all liked the rabbity boy. We finally agreed that I'd consult the Mir and we would abide by his decision. That afternoon, when I

asked the Mir, he backed the boys completely. He would not be happy, he said, to see anyone of Leman Shah's family in my school. Family means much in Hunza; I was breaking many customs, but that one I must not violate yet. We would take Nur-ud-Din and leave Leman for a future class. I now had five boys, counting Suleiman Khan, the boy from Jutial, awaiting us in Baltit, and Hamid due to come from Chapursan. This was enough to start the school; we must return to Baltit at once.

Next morning dawned stormy, windy, and bitterly cold. Rolling grey clouds filled the valley just over our heads and surged against the feet of the mountains around us. We fought off the usual collection of people who were sure they knew more about loading our packs than we did, and started down the trail. Bili and Kashgabai hung their heads and plodded, their tails wind-lashed up around their flanks, two of the boys riding with shoulders hunched against the driving sleet. Behind walked the other three, their heavy gray cloaks pressed against their backs and streaming out in front, white hats pulled down against their ears.

About two miles south of Ghulmit, the trail runs across bare granite streaked with pegmatite veins. I had crossed these veins often before, but this time a wet, blue crystal glinted at me, and I stopped to look. Beryl! And the feldspar next to it was albite, not the usual orthoclase. Hastily I shouted through the wind to the boys: "Hayat—Beg! You two keep the caravan moving. Stop for lunch whenever you wish, if I'm not with you. I'll stay here for a while and look at these rocks."

"All right, Sahib!" they hailed back, but even through the wind I heard Beg say, "Rocks, rocks, rocks! In the middle of a sleet storm! It's all he ever thinks about."

I prospected those pegmatite veins as far as the cliffs would let me. Most pegmatites are nothing but coarse-grained granite, but every so often a pegmatite develops all sorts of weird, rare minerals—gem stones, lithium ore, and other things. Beryls and albite feldspar are usually one's first intimation that a normal pegmatite is becoming valuable. In an hour, I had determined that these veins became normal to the west. I could see, however, that the same veins cut the mountain face to the east, across the river. Rare minerals, if any, would be there. As crossing the river would be a two-day job, I hurried on.

It was difficult to keep from being blown off the *paharis*, where the trail was tacked to cliff faces with wooden brackets. My boys and horses were fighting the icy wind, so I caught up with them quickly. Nur-ud-

Din had a bad bronchitis, which the raw day and his inadequate clothing were making worse. Soon his cough had weakened him seriously. I put him on Kashgabai's load, wrapped in a blanket, and on we went. He had to dismount at every dangerous place, and this started his coughing all over again. I was worried. Twenty-three miles of winter trail is no treatment for a sick boy. Dusk caught us at Altit *pahari*; I sent Hayat and Beg ahead as runners to tell Haibatullah to have supper ready, and the rest of us felt our way slowly along the trail in the gloom.

CHAPTER XIII

We Organize the Hunza Handcraft School

WE arrived in full darkness. Hayat and Beg unsaddled while I shepherded my three tired new boys up the castle stairs and inside. As we entered the dining room, they stopped and gaped. A miserable old chandelier bedecked with glass bangles hung from the ceiling. It was never used, but Beg had stuck some candles in just for fun, and now the prisms were tinkling in a slight draft, scattering reflected bits of light about the bare walls and illuminating the Queen Victoria poster.

"Oh!" said Burhan. "Oh—how beautiful!"

"I think," Nur-ud-Din murmured, "that I died on the trail today and this place is Allah's Paradise!"

When I showed them the audience chamber, with its fine rugs and blue glass Christmas-tree ornament, they were speechless. Haibatullah had tea ready for them, but not supper, because my good Haibatullah never did learn to prepare a meal in less than two hours. While they were warming themselves before the fireplace, beneath Queen Victoria's picture, I gave Nur-ud-Din some cough medicine. Hayat prepared a large bed for them in the dining room.

Now we had students, teacher, tools, wood, and money, but no building. The Mir had told me that classes should not be held in my apartment, and had suggested that we use the old school in Baltit. In the morning Hayat and I visited the "old" school the Mir had mentioned. We found its three rooms already crammed with the hundred-twenty small boys of the Baltit elementary grades. Obviously there was no place here. Hayat led me outside and explained that the Mir had known I couldn't use this building, but that this was his way of emphasizing that I mustn't hold it in my apartment, where the Royal Family had once lived. Hayat felt sure that the Mir wouldn't mind our holding the school downstairs in the dispensary room, and moving the dispensary up to the old reception room.

I stared at him in amazement. A case of *lèse majesté* involving four rooms, two of them mud-floored and without windows! Still, Hayat was usually right about Hunza, so I telephoned the Mir. He agreed with

great relief, and we hurried back from the new palace (where we had telephoned) to our castle.

In a minute Hayat was loading boys with medicine in the dispensary, and I was unloading them at the top of the stairs in the reception room. Within half an hour we had the dispensary reorganized upstairs, our carpenters' tools in the former medicine cabinet, and the boys' beds shifted to a place along the north wall in the room below.

Word had flashed around Baltit that we had returned, and we were no sooner settled than Suleiman, our student from Jutial, ran up the stairs to join us. He introduced himself to the up-country boys in the usual embarrassed fashion of adolescents, and for a few minutes thereafter they ignored each other like strange cats.

Then Hayat came to me. "Sahib," he said, "here's a cousin of mine, from Altit, who wants to join our school." He motioned to a thin, brown-eyed boy who stood behind him. I stared—where had I seen that boy before?

"Sahib, don't you remember?" Hayat asked. "He's my cousin Ghulam Rasul, the one you gave medicine to early last summer for dysentery and weak blood. He was cured in a week, Sahib, and hasn't been sick a day since."

Then I did remember! Ghulam Rasul had been on the point of death from chronic anemia, malaria, and dysentery, which he had suffered for twelve years. He wasn't the picture of robust health now, but at least he was walking and evidently wasn't sick. If he came to live with us, I could see that he was properly nourished, whether or not he made a good wood-carver.

"All right," I told Hayat, "move him in."

Just then Mohammed Rofi's weather-beaten features emerged from our stairwell.

"I heard that you were back, Sahib," he wheezed. "When do you want to start the school?"

"Tomorrow, Mohammed Rofi."

"Very good, Sahib. And one other thing—" he puffed up the stairs, followed by a hatchet-faced, intelligent-looking thirteen-year-old whom he introduced as his nephew, Mullah Madut, who wanted to attend our school as a day-boy.

"Surely he can come," I answered, "but tell the people of Baltit that will be all. We haven't tools for any more."

"Thank you, Hazoor!" and the two of them withdrew.

We now had seven boys, six of them boarding-school and one day-school.

The schoolroom, my old dispensary, had the usual Hunza smoke-hole in the roof, but it also boasted a mud fireplace and chimney. If we could close the smoke-hole with a mica window, it would still admit light but would shut out the cold. I drew plans for a windowframe and set Hayat to making mica windowpanes to fit. He had already learned to measure things, and was fast becoming my right-hand man.

In the afternoon, I called all the boys together in my dining room, and seated them in a ring on the floor. Then I spread the Erector set out in the center—girders, nuts, bolts, little brass gears, big black wheels, axles, and elbow-joints.

Burhan picked up a black wheel, turned it on its side, and spun it slowly.

"This is no use," he said, "the rim and that thing in the middle keep it from lying flat. It wouldn't grind wheat, even in play!"

"Turn it up on edge and push it!" I suggested. He did, and naturally the wheel rolled away.

"Hi! It moves by itself!" he exclaimed. He tried again and in an instant all the new boys were rolling wheels around the floor, while Hayat and Beg watched them with sophisticated amusement. I showed them how to put two wheels on an axle, which was even more effective.

"Sahib," Burhan asked me, "did you make these things you call wheels all by yourself?" I assured him that the wheel had been invented somewhat before my time. Then Hayat showed them how to fasten girders together with nuts and bolts. Nur-ud-Din tried it, very shyly. To his surprise it worked, even for him. He sat holding the two girders, giggling with embarrassed delight over his achievement.

Next morning Hayat took all the boys down to the Agha Khan's school and helped them get started. School was in session only during the warmest part of the day, from about 10:30 to about 2:30 (there were no clocks in Hunza, so there could be no set hour). The boys would all attend regular school, learn their three R's, geography, and history, then do their woodcarving in the afternoon.

Meanwhile, I ran my dispensary up in its new quarters. Malaria and dysentery had disappeared, and in their stead were bronchitis, sinusitis, sore eyes, and horribly chapped, bleeding hands. As each coughing patient stepped through the door into the room, the cold wind blew in with him. Since no Hunza ever bothered to shut the door, the wind continued to whip at their clothes after they were inside. These people

were so accustomed to being cold all winter that they didn't try to keep themselves warm. At least a hundred times every morning I yelled, "Shut that door!" The temperature was just a little below freezing during the day, but the raw gray mist and damp wind made it feel much colder. Once a man stood before me, coughing so hard his whole body shook, clad only in pants and a *choga* which sagged open to the waist. "I have a little cough, Hazoor," he gasped. "Cure it, please."

Angrily I grabbed his *choga* and lapped it over across his chest. "I'll give you medicine," I told him, "but you don't deserve it! If I see you walking around letting the cold wind hit your naked chest, I won't give you any more medicine all winter! Now take this and go home, keep warm, and *don't* be silly!" He grinned sheepishly and obeyed. I was beginning to adopt the whole tribe, and they were liking it.

While I was still treating patients that first day, the boys returned from school, bringing old Mohammed Rufi with them. Tantalizing sounds of hammering and sawing came up the stairwell. I rushed through my last few patients and hurried down to see how things were going.

Dim light from the grey sky filtered down on Mohammed Rufi, clumsily sawing a board, while the boys sat around in disconsolate, cloak-wrapped heaps trying to pretend that they weren't bored. No one was saying a word.

"What are you building, Mohammed Rufi?" I asked, stepping over to him.

"A chair, Hazoor," he replied.

"Have you explained to the boys why you are cutting that board?"

"No, Hazoor—they will learn just by watching me," he answered.

"Oh, no, they won't!" I retorted. "Suppose you watch me teach them this afternoon, then you can carry on the same way."

I gathered the boys about me and laid out the carpenters' tools on the floor.

"What's this?" I asked.

"A hammer, Sahib!" in chorus.

"And this?"

"A saw, Sahib!"

"This?"—blank silence. None of them had ever seen a plane!

"Or this?"—silence again. Files were new to them, too. So were squares, hacksaws, coping saws, wood chisels, and all the other tools except a miserable, dull adze with a chipped edge that Mohammed Rufi had brought with him. I told him, gently, never to bring it again because it was both dangerous and imprecise, then turned back to the boys.

"Saw this board, Hayat," I said, handing him saw and wood. He tried, but his cut was crooked. "Now watch," I told them, and drew a straight line on the board with a try-square. They gave me their absorbed attention, leaning in so close they almost shut out the dim light.

"Why do we draw straight lines?" I asked.

Immediately they chorused again. "Because you are our Sahib and you want us to!" I noticed, however, that Hayat was looking thoughtful and saying nothing.

I sawed a straight cut along the line, and showed them that two boards cut straight would fit well, while boards cut crooked wouldn't. They didn't see why anyone should care if things didn't fit well! They had never seen anything measured in their whole lives. They had no concept of time, they had never seen anything square, their clothing was never cut to fit any particular person. We would have to start with the idea of accuracy. I was expecting these boys to make the whole stride from Stone Age culture to modern precision in a year or two. It would be no shame to them if they did not succeed.

"You won't understand measuring at first," I told them, "but do it anyway. As you work, you'll learn how useful it is. Now Mohammed Rofi—"

"Yes, Hazoor!" he moved a little faster than usual, worried about his job.

"I want each of these boys to build a small box to keep his little personal things in. Remember, you see that the boys measure every board, but don't *you* build anything! *They* must do it!"

"Oh, yes, Hazoor!" Good intentions, but I doubted the old fellow's ability to understand what I wanted. Dusk was darkening, so we closed school for the afternoon and began supper.

Having the school in the same building as my quarters imposed an awkward system upon us. Obviously, since the Mir would not permit me to let the schoolboys eat upstairs with us, they must cook at their fireplace and eat in the schoolroom. Just as obviously, this fully occupied the schoolroom. It would be ridiculous for the four of us to crowd in with them for our meals. The fireplace and the pans we had were not big enough to cook for ten people at once, anyway. We therefore set up two separate establishments, my staff in our upstairs quarters and the school downstairs in their room. I arranged a rotation system for them. Each boy would be cook one day, helper and dishwasher the next, then be free until his turn came again. Haibatullah was cooking for Hayat, Beg and me in the old inner room of the castle because our cook-shack on the

roof was too cold. The boys accepted the arrangement cheerily. The whole set-up was entirely new to them, but I foresaw that they would eventually grow jealous of Beg and Hayat. These two were salaried employees, on an entirely different status from the schoolboys, so it was not logical that jealousy would arise. Unfortunately, however, the boys were human rather than logical.

Sherin Beg caught me alone after supper that night, in the dispensary room.

"Sahib," he said shyly, "I'd like to ask a favor."

"Surely, Beg, if it's something I can do," I said with some surprise, because he so rarely asked for anything.

"Well, Sahib—" he stared hard at the floor,—“last summer I said I wanted to travel with you rather than go to school—”

"Yes, son—" I said encouragingly.

"Well, now all these boys are here, and it's fun being with them, and they're going to school and Hayat's going to school, and I want to go, too!" Eager words tumbled out, his bashfulness overcome.

"Of course you can go to school, Beg!" I said as heartily as possible. Naturally he wanted to be with fellows his own age and to share what they were doing. But this left me to travel alone, and I was selfish enough to resent the loss of his help. Haibatullah was absolutely no use in the mountains, and I couldn't afford to hire another permanent assistant. Winter camping is rough enough, even with help; alone, it would be brutal.

"Sahib," Beg said anxiously, as he saw me pause, "if this means that you'll have to travel alone, I'd rather come with you! I can't let you go by yourself up in the mountains! And now there is snow—"

"Don't worry, Beg," I lied calmly. "A good friend of mine, named Issa (Jesus) will travel with me." I could only hope I would be right—divine aid was needed. Beg was convinced by my tale, and trotted off happily. Many modern Asians are named Issa.

Patients were fewer next day, so I was able to supervise carpentry again. The boys kept trying to hold a board with both feet and one hand, while they sawed a crooked cut, because Mohammed Rufi did it that way. I ordered him to build a saw-horse, and he promised to do it at once.

Our school was beginning to function, but there was yet no sense of "belonging." The boys' conversation was all "you" and "I," never "we." They hadn't begun to make friends with each other; they hadn't even quarreled or been jealous of each other. I had learned by this time

that it isn't usual in Hunza to have friends outside your own family, but these were boys away from home for the first time and I had expected their loneliness to knit them into a unit. Time, and life together, would certainly develop group feeling, but a good celebration might hasten it, so that evening I arranged a party.

While the schoolboys were cooking their chapatis downstairs, I beat up a few eggs Rachmet Ali had bought for us with some sugar, a gift package of powdered milk from my American friends, and some strawberry-flavored corn flour (British for cornstarch) from Peshawar. This I boiled to a nice strawberry custard over Haibatullah's little cooking fire in our room, then set it out on the roof in the howling winter night to cool. Meanwhile Beg and I peeled a batch of potatoes and sliced them thin for potato chips. My household and I took the custard, potatoes, and three pounds of reasonably fresh sheep butter down to the school-room where the boys had finished their chapatis and tea. They sat in a close circle around the fireplace, savoring every bit of their sweet custard, while I fried the first batch of potato chips and gave two, fresh and salty, to each boy. Then I couldn't fry them fast enough for the eager hands that snatched them as quickly as I dipped them out of the fat!

"Hai!" said Suleiman to Burhan, "That one was mine!"

"Try and get it!" Burhan munched at his cheerily, and of course there was the beginning of a small riot.

"Stop it, you crazy ones—you'll spill the frying-pan!" I called, turning from the fireplace. A ring of happy brown faces, fire-lighted against the night blackness of the ancient room, grinned back at me. All at once I was very much content. These were my family, my responsibility, and they were having fun.

After we were really full we felt gay, so we danced on the mud floor in a circle, Hunza fashion, and sang weird combinations of Brushuski, Wakhi, German, and English. We had no music, but the singing did very well as a substitute. The dance was interrupted once by an earthquake, but it was only a minor one, so we didn't even go outside. When the rumbling stopped we went on with the party. I taught little Nasar Mohammed to dance "Hi-ho, Booms-si-daisy!" and the kids howled with delight. Nur-ud-Din watched, his face showing mixed panic and hope that he might be included. When I swung him in, he was half paralyzed with excitement. The instant I let him go, he grabbed and pounded Ghulam Rasul because he was so happy at being actually included that he *had* to do something.

After the party the boys went to bed in a row along the side of the schoolroom. They were much too excited to sleep, and sang in bed for about an hour more. Whatever else we might lack, we now had morale.

I had purchased a fine young cow yak from the Mir, at Ghulmit. It arrived the next morning. I sent the Mir a gift of sulfacetamide eye drops and many other medicines he had asked for by the herder who had brought the yak, and entered the 275 rupee debt in my ledger. We all hurried down to the courtyard—where the yak stood woolly, massive, and distrustful—to begin the butchering. As usual, custom required the most awkward possible procedure. Eight men and boys forced the brute bodily up the narrow castle steps to the dark landing outside the schoolroom, where a medieval drainhole had been built to carry blood back out to the courtyard. Here they tied it very clumsily around all four hocks, threw it down, and manhandled it into position. Finally, after forty minutes' hard work, Rachmet Ali said "*Allahu Akbar!*" and cut its throat.

Old Nasar, the chowkidar, was determined to do the butchering, but I made him stay away, partly because I wanted our staff to do their own work and partly because he liked to butcher and then claim hide, head, and one hind quarter for his fee. Custom provided that the butcher receive the neck and tripe, and I was weary of arguments with Nasar. He was the worst minor nuisance I had, old, steeped in rascality and tradition, and determined to teach both to the boys.

We had been buying firewood in small bundles, from day to day, but this wasn't adequate for our enlarged household. Rachmet Ali had located two men who had trees for sale, and after the butchering he led me to them. The first man, near Sherin Beg's home in the Kurukutz section of Baltit, had a big apricot tree that he wanted to sell us for 240 rupees. I estimated its cubic footage and figured its weight at twenty-four maunds. Since the normal price of firewood was four rupees per maund, I refused. He wasn't trying to cheat me: he simply had no way of estimating weights. The tree looked very big, so it must be worth a lot of money—why not 240 rupees? Rachmet Ali then took me to a pasture in Altit where a man offered me three smaller trees at a lump sum of 35 rupees. These figured at nine maunds and I bought them, of course. I tried to teach Rachmet Ali how to estimate trees, but the arithmetic was beyond him; he had gone to school less than three years when he was a boy. Meanwhile, this operational problem had taken half a day of my time. If only I could have a dependable adult assistant who would take all these details off my hands!

I knew that I must leave for Gilgit very soon in order to meet young Qadir of the Pakistan Geologic Survey and guide him up to Hunza, teaching him the geology as we traveled. I also wished to hand in a report to the Ministry for Kashmir Affairs, suggesting that they establish a sandpaper factory in Gilgit or in Aliabad, using Hunza garnets for abrasives. Pakistan was at that time importing all of its sandpaper from England, and was getting an ordinary, low-grade glass paper. I was suggesting that they hand-pick the garnets at Murtzabad, crush and sift them with local water power, and send the concentrates to Gilgit. They could make the sandpaper there, and fly out the finished product. This would not be too expensive because the Pakistan Government had an agreement with the Orient Airways that all outgoing goods traveled free. I made three samples of sandpaper, sifting ground garnet through our flour sieve and an old shirt, and using a paper bag and Duco cement for a base. Those were not ideal materials, but the samples worked.

A very serious thing occurred the day after we butchered the yak. Haibatullah was preparing a very late lunch, as usual, because all of his meals were a few hours late. Hayat and Beg went off watering the horses. They took their polo sticks with them so that they might play a little polo afterward.* I had given them permission to go, but for some reason Haibatullah was always furious when the boys used the horses. He bawled down at them from the castle roof that lunch was ready, and scowled through the first of the meal. When we were half through, he turned on Hayat.

"Isn't one dead horse enough?" he demanded. "Since when does a servant take his master's horse without asking?"—and so forth. I stopped him as soon as I could, but far too much had been said. Beg tried to smooth things by saying that they had only exercised the horses to warm them after drinking cold water, but Hayat glared at him and barked out, "Tell the truth! We went to play polo! The Sahib has called us his sons, and we acted like sons!" Then he broke off and cried, and I had to talk to him for an hour to keep him from leaving us completely. The boys had complained of Haibatullah's scoldings before. Much as I liked Haibatullah, I couldn't blame them. He said harsh things that hurt deeply. The Turki-Hunza friction in Baltit had increased noticeably since summer and this open break would set the whole community

* Polo is a native Central Asian game which the West learned in India and Iran. Every Hunza oasis had its polo field, where the few lucky enough to own horses played sandlot polo with home-made sticks and balls, murderous rules, and great enthusiasm.

against Haibatullah, which would create an impossible situation for my project. The only solution fair to all parties would be to transfer Haibatullah to our Gilgit headquarters. It would increase expense, but it would eliminate friction without forcing me to discharge Hayat or Haibatullah, both of whom were giving me loyal service.

Haibatullah tried several times during the afternoon to make up with Hayat, whom he really liked very much, but he received either stony silence or monosyllabic replies. Supper was hushed and awkward.

Haibatullah's removal meant that I would need someone to take charge of my affairs in Baltit. My original plan had been to spend almost all my own time in Hunza, but with the Kashmir Ministry pressure on my whole project, I could not hope to be at Baltit more than half time. Of my staff, Rachmet Ali had no initiative, the old carpenter Mohammed Rofi lacked the needed qualities, Nasar was a thief and a rascal, and Sherin Beg was not a natural leader. It could only be Hayat. Asian boys are mature for their age; in experience, Hayat was like an American eighteen-year-old.

From now on, he must be officially in charge of the woodcarving school at which he was a student. He must supervise Rachmet Ali's buying and keep all accounts. In my absence, he must represent me in dealings with the Mir, his ruler, and with all the adults of Hunza. He must superintend my organization of three men and seven boys, and manage expenditures of about five hundred rupees per month.

It was too much for a fifteen-year-old boy, and I knew it, but there was no choice. Young as he was, Hayat alone had displayed the qualities of an administrator. Next morning, November thirtieth, before Haibatullah and I left for Gilgit, I called my whole group together, explained to them that Hayat was my deputy, and publicly turned over to him the account book and the keys to my confidential box. He accepted the responsibility courageously but very gravely. I rode away knowing that if you treat a boy like a man, he'll act like one ninety-nine percent of the time, and hoping that the unfair load would not completely overwhelm him.

CHAPTER XIV

Cooperation with Mr. Qadir

HAIBATULLAH and I crossed the Gilgit bridge and swung into the west end of the Gilgit bazaar, with two horses and a lean, blonde Hunza packman behind us. This was the Turki section of town; stout gentlemen with drooping moustaches and round skullcaps stood respectfully at the door of each shop to salute us as we passed. They all knew us now; from every shop came "*Salaam alaikum, Effendi!*" and a welcoming smile.

We hurried through town and up the hill to our headquarters, unpacked Haibatullah's things and my bedroll, and paid off our Hunza. Tired and hungry from our three-day walk, we decided to eat in a restaurant rather than cook supper. We had our choice of a Sheena restaurant, a Punjabi restaurant, and an Uzbek Turki restaurant. Haibatullah chose the Turki restaurant because a friend of his ran it, and I agreed because I liked Turki food.

It was a small place, just a single long table flanked by a couple of benches, under a roof opening to a dirty alley. The adobe cook stove stood only a couple of steps away, giving us an appetizing view of our meal in preparation. A chilly breeze augmented our hunger.

Several Turki men came to talk with Haibatullah while we ate. I paid little attention until I heard one of them say *sizningiz effendi* (your gentleman) and *hukmet* (government) in a low, serious tone, then I looked at Haibatullah inquiringly.

"Sahib," he urged quietly, "let's finish quickly here, and talk at our house. There is bad news." What now? I wondered. We hurried our meal as fast as our dignity would permit, and paid our bill.

As soon as we were inside our gate, Haibatullah explained to me that the P.A. had decided to repossess our headquarters and give it to a Pakistan Army officer for a home. Bazaar rumor had it that we would be asked to move day after tomorrow.

"That gives us plenty of time!" I said instantly. "Tomorrow I'll arrange to move into one of the Mir's outbuildings. We'll be all out and settled in our new quarters by the time the P.A. tells us to leave. And

remember, Haibatullah, whenever people mention this to you, tell them that the American Sahib knows the Pakistan Government is very short of space and is glad to co-operate."

"Very well, Sahib," he grinned. Actually, there was an acute shortage of space and I hadn't been using my Gilgit headquarters enough to justify holding it. Telling the whole bazaar that I was to be dispossessed was a discourteous way of arranging the move, but I was too busy now to worry about details. Next morning I called the Mir by telephone from his Gilgit house and tactfully—it was a party line for Gilgit military and government personnel—explained the situation. He told me that I was very welcome to a room along his east compound wall. The Mir was certainly a reliable friend in matters of housing.

Once this was settled, Haibatullah and I went to the bazaar and started the day's buying. My new boys at the woodcarving school needed almost everything. Clothes—so I shopped for thirty yards of heavy cotton cloth; dishes—cheap pans, cups, tin plates, and a large piece of sheet-iron on which to fry *chapatis*; food—salt, pulse, a maund of rice, onions, half a maund of sugar. We also bought schoolbooks, candles, slates (imported from Italy, when Hunza was full of good slate!), thread, matches, an axe, shoes for Haibatullah, and a coat for Hayat. The new boys desperately needed bedding, but the fine Turki felts and blankets were missing from Gilgit bazaar now. Over a year had passed since the Communists had closed the great north trail. We bought the last three blankets in town after a two-hour search. We stored our purchases in our new home.

The room was adequate for storage, but sadly deficient as a headquarters. Two wooden cots with rope "springs" occupied more than half the available floor space. The mud floor was damp, and the fireplace small. The single, paneless window closed with a wooden shutter. Haibatullah and I worked until evening airing and sweeping out the place, then returned to our old headquarters for our last night there.

We rose at dawn next morning, and were packing the last load of our baggage on Kashgabay when a Pakistan Army major drove up in a jeep. He stared at us in amazement.

"What are you fellows doing here?" he asked. "I was told that this place was unoccupied!"

"Give us fifteen minutes and it will be," I answered cheerily. "Been in Gilgit long, Major?"

"Just arrived last night," he replied, "I'm a Hunza man by birth, but I've been down-country for years."

At that moment a skinny little man from the P.W.D. office bustled through the gate, almost colliding with Kashgabai. He teetered to a stop in front of us.

"You are hereby ordered—" he began in a very supercilious tone, then stopped in surprise, flapping an eviction order at me in confusion.

"Calm yourself! We are already leaving!" I retorted with great dignity, as Haibatullah and I followed Kashgabai out the gate. That P.W.D. clerk had always been rude, and it delighted my soul to baffle him.

Our new headquarters was totally lacking in dignity. In the future I should be compelled to entertain visiting officials in a single, mud-floored room without chairs or table. Worse, I was obviously in the Mir's servants' quarters, which meant loss of face.

While Haibatullah finished jamming supplies under the beds in our new quarters, I went to the Gilgit dak-bungalow to find Qadir. He was supposed to have sampled the pyrite at Jutial and the copper at Murkui, and to have prospected for iron at Murkui, while I was in Hunza. Young Mr. Puri met me at the dak-bungalow gate.

"Qadir will return for lunch," he said. "Won't you come in to my room while you wait? He's up talking to the P.A." In a few minutes Puri and I were deep in conversation about the farming methods around Gilgit and his plan to substitute a tax of so much grain per acre for a money tax. We didn't even hear Qadir until he twitched into the room.

He showed us samples from the pyrite at Jutial, and assured me that the vein continued full width and very rich for at least a quarter of a mile. Then he informed me that I had been entirely wrong about the geology of Dunyor Nullah, where the iron ore boulders occurred. The gravel I had mistaken for outwash from Murkui Nullah was actually a terminal moraine of Dunyor Glacier, which meant that the iron deposit lay high under the snow of Rakaposhi, where no one would ever find it.

With a superhuman effort I controlled myself. Murkui Nullah had built a big cone of stratified gravel where it emptied into the main Dunyor Nullah, and all the magnetite boulders were in this alluvial cone and along the bed of Murkui Nullah itself. In other words, Murkui Nullah was washing those ore boulders down from somewhere in its drainage basin, and one had only to prospect over that basin to find the deposit from which the boulders were coming. Qadir had mistaken the alluvial cone for a glacial moraine of the main valley, which geologically was as though one mistook a horse for a cow, and revealed at once his shaky grasp of fundamentals. Later I was to find the magnetite ore, up Murkui

Nullah where it must be. He had been so anxious to prove me wrong that he had missed his real chance to discover the ore body.

"Did you sample the copper vein up Murkui Nullah?" I changed the subject hopefully.

"The P.A. wouldn't cooperate—no supplies—no men to dig—nothing around here to work with!" he jerked out nervously. All of which meant that in three weeks he had done one day's work at the pyrite vein in Jutial and a couple of days' work going to Murkui and back to pick up some magnetite boulders.

Two days later, on December sixth, Qadir was still temporizing about coming with me. I hired an impoverished, dark-skinned young Hunza named Musa Beg (Chief Moses) to help me, and left for Nomal to do geologic work there until Qadir arrived. He promised to come within a day or two. We camped in the dak-bungalow at Nomal.

Next morning I walked back three miles to restudy the veins near the trail. It was a gray but pleasant day, and I spent most of it in a narrow side canyon that had slotted through the mineralized zone. In mid-afternoon a big eagle came to visit me and soared close over my head: the still air in his moving feathertips whistled delicately, like a number of small, melodious flutes.

Qadir had arrived by the time I returned to the dak-bungalow. A tall, lean Sheena policeman, whom I recognized as one of the Gilgit police force, was standing disconsolately beside the bungalow as I entered the garden gate. He beckoned hesitantly, and I went to him.

"Sahib," he muttered urgently, "I'm in trouble. The P.A. Sahib ordered me to escort this young Government Sahib, and said the young Sahib would take care of me. Now the young Sahib says I'm supposed to feed and house myself, and I haven't any money. He said go hungry, then—and I've been helping him all day! Could you let me eat with your servant, sir?"

"*Nahee*," I said, "this is impossible. My servant shares my food, as is American custom. But I'll do better." I dug in my shirt pocket. "Here are ten rupees for you. Now you can get food wherever your Sahib goes."

He thanked me with some embarrassment and hurried off. He was a respectable policeman, not accustomed to begging, and it disturbed him.

I found Qadir inside, fussing angrily about the service and facilities of Nomal. After supper, which we ate separately—his curry was too hot for my stomach, and my servant was too much for his dignity—we had a short conference. I told him that the veins south of town were of no

value, but that a big vein cut the whole mountainside five miles north of us near a village called Juglot. Although I had previously studied the bottom and found it worthless, the top might be good. The mountain face at the vein was too steep to climb, but we should be able to reach the top by climbing the canyon east of Juglot, then cutting back south to the vein at about 12,000 feet. This would be a two-day trip, so we would need coolies. The village lumbardar was already hiring a couple for me, and I urged him to arrange for two also. He grunted and did nothing.

The next morning my two coolies, a sleepy Sheena and a lowering Gujer, showed up at 9:30. Qadir remarked that obviously he couldn't accompany me because no coolies had been provided. I explained to him that he would either have to make his own arrangements or give me authority to make them for him. With winter closing in, we could delay no longer. Then I drew him a sketch map of the trail—he couldn't lose his way because there was only one trail—and went on, leaving him to follow. We pitched camp above Juglot.

I waited for Qadir until 10:30 the next morning. When he didn't appear, I started alone up the hill to the south, trying to work over toward the top of the vein. Just as I got myself well tangled up among some cliffs it started to snow heavily. I returned hastily to camp while I could still see the way, cursing at the time and work wasted by Qadir's eternal delaying. The snow stopped after dark that night and the following morning Musa Beg and I returned to Nomal to find Qadir comfortably ensconced in the dak-bungalow armchair, as pert as could be.

"Well," I asked briskly, "where were you?"

"Oh," he replied, bouncing out of his chair, "I just made camp at the bottom of the vein, then during the day I climbed up to the top, collected these samples, and returned. Much better than your plan!"

I looked at his samples and received a shock. Unknown to Qadir, chemical weathering in these mountains produces different weathering stains at different elevations, due to the varying moisture-temperature conditions, so one can tell the altitude from which a surface rock has come. The top of the vein was at 12,000 feet, and Qadir's specimens came from not over 9,000. Only another research man can realize the shock of having a supposed scientist tell you something deliberately false about a specimen. While I stood dazed and angry, Qadir babbled on about "6,000 feet from the river to the top and back in a day. Quite a climb, really a climb to be proud of!" Later, the Sheena policeman told me he hadn't climbed two hundred yards up the mountain.

He then told me that he planned to go to Naltar the next day. I spoke out plainly. "Do you expect to accompany me at all?" I asked. He bristled importantly. He had, he said, made out and submitted his program, and it could not now be changed. Since the Kashmir Minister had given him contradictory orders, he felt free to make his own schedule. He planned to cover the entire Gilgit Agency from January through April, but believed that he could give me the last two weeks in December. This from a man who was not qualified to do advanced undergraduate work in America! Not only that, but Qadir had been sent up specifically at my invitation so that I could teach him what I had learned. I said nothing, because I couldn't trust myself. Fortunately, at that moment young Puri walked into the room; his friendly presence relaxed the tension, and in a few moments I had recovered my equilibrium.

Next morning I told Qadir that if he wasn't going to accompany me elsewhere, I should prefer that he visit Hunza at some time other than my Christmas vacation. Furthermore, at this time of year clouds obscured the mountains almost daily, and he could see little of the regional geology. He promptly accused me of trying to keep him out of Hunza, and I wasted two hours in fruitless argument. So ended a good idea gone sour. Instead of a young scientist who would co-operate, it had been my fate to get an opinionated and defensive man. Since Qadir had decided not to accompany me, I started back to Gilgit to finish buying supplies for my staff in Hunza. I wondered how he would explain his failure to accompany me. He would make it my fault, I could be sure.

As I walked I thought of Qadir and the whole dilemma of the Asian "young intellectual." The problem is worst in India, and especially in Bengal, but it is serious enough even in the Punjab. For every well-balanced Puri there are two or three Qadirs. It is not simply a question of youth or of a foreign-imposed educational system. I think rather that it is a sign of a determined effort to defend and maintain their own culture, and at the same time to face the absolute necessity of trying to absorb Western philosophy. They have demonstrated that it is as impossible to graft Western technology onto an Eastern culture as it would be to make an apple tree bear pears by grafting ripe pears onto it.

Qadir had memorized a good many geologic techniques, and to that limited extent was drawing on the West. He had failed completely to learn Western objectivity and self-dedication, which make application of those techniques serviceable, and therefore could never do a really acceptable piece of research. Failing in this, he turned to the self-consciousness and authoritarianism of his own culture, only to find that he

was no longer truly inspired by it. The result was an unhappy and unstable man, fired by the frantic chauvinism which is always a defense against admission of defeat. Qadir, in plain English, could no more learn to be a geologist than I could learn to be a great Urdu poet. Each of us would have to change his fundamental attitude, not simply learn a technique. The dilemma and resultant bitterness of the East lies in the fact that they must produce scientists and engineers if they are to survive.

Certainly it is pointless to castigate the Qadirs, unpleasant and damaging though they may be. It is equally unsound to let this push us into fascist theories of race superiority. Every American who has worked in Asia knows that if you take intelligent but unschooled young fellows who have not been too set in their own cultural mold and raise them in a Western cultural environment, you produce nice average young Westerners who are usually rejected by their own people.

On the other hand, an Eastern boy with a purely Eastern education all too frequently becomes a reactionary religio-political leader who complicates rather than clarifies the situation. Attempts to mix the two systems produce the tragic schizophrenia found in intellectual young Asians. Given time, their confidence may develop until the Puris outnumber and outrank the Qadirs; then we shall see both "isms" and "anti-isms" decline, and strong Asian peoples emerge. However, I believe with Toynbee that this change will come on the fringes rather than in the citadels of Asian culture, just as it already has come to Turkey rather than to the Arabian center of Islam. Also, there is always the question whether the mounting pressures of Communism and overpopulation will permit it to come naturally. In Hindu India, an episode of chaos is inevitable, but the Islamic countries have a cultural foundation more capable of orderly, self-generated development, and may be able to escape revolution.

On arriving at Gilgit, I sent Haibatullah out to buy supplies while I visited the P.A. to report Qadir's decision and to explain my program for the next few weeks. I found him pacing his living room in great agitation.

"Come in, Clark, come in! Have you heard what happened? Terrible tragedy! A complete violation of my orders!"

"I've been at Juglot and heard nothing, P.A. Sahib," I told him.

"Those three young Englishmen! We granted them permission to leave on foot over the caravan trail through Chilas. When they reached Bunji, they turned off east across the bridge without permission and

tried to climb Nanga Parbat. In December, in the snow! Now two are dead and the third is in serious condition with frozen feet!"

"Oh, no!" I gasped. "How did they get through your bridge guard? Didn't they meet anyone on the way? Which one is still alive?"

"Marsh," he replied. "They met my Assistant P.A. on the road, but they told him the same tale they later used with the bridge guard—that Mr. Gurmani had suddenly granted permission to climb Nanga Parbat. Because they were Englishmen, no one suspected them of lying."

He gave me the full details. Since they didn't dare take coolies with them, they had tried to climb unaided, doing the work of forty men at high altitude in winter time. At 15,000 feet Marsh froze his feet and had to stay behind. He watched the other two make camp at 18,000 feet that night. All the next day he could see no signs of life with his binoculars, and the second day a blizzard came. He worked down through the three-day storm with great difficulty, and reported in to a Northern Scouts outpost. Lt. Shah Khan of Hunza took a patrol up to hunt for the camp, but by that time snow had fallen and the camp was not to be seen. The only comforting thought was that the two men must have died very peacefully in their sleep the first night, as overworked people do at high altitudes in the winter. Marsh was brought back to Gilgit, treated, and sent out by plane. What a ghastly end to an adventure—and entirely unnecessary! There was little danger in those mountains, unless one deliberately sought it.

I left for Hunza the next day, very much saddened, with Musa Beg leading an overloaded Kashgabai.

CHAPTER XV

Holiday Season

WE rounded the last ridge and looked out over the winter gray of Hunza oasis. A chill wind hurried the puffy clouds and cut into our bodies already aching from the three-day walk. Five miles of bare fields interspersed with naked, sooty trees stretched ahead of us in the dim light of late afternoon. A spot of moving brightness in the distance caught my eye—then another—and another—until I realized that the whole oasis was sprinkled with slowly shifting specks of red and white. Groups of gaily dressed people on horseback and on foot were on the move.

"Musa Beg!" I called over my shoulder.

"Yes, Hazoor?" as he half-dragged the unwilling Kashgabai a little faster.

"Where are all those people going? And why are they all in their best clothes?"

"Oh, Hazoor, what a question! Tomorrow is marriage day in Hunza. Everyone who wants to marry this year does it tomorrow. The people you see there are the bridegrooms with their family and friends, going to the bride's house. They will stay just inside the gate, but will not enter the house. They hand gifts through the door to the bride and her family. They also give presents to anyone who passes on the trail." Suddenly he leaned forward on Kashgabai's rope. "Come on! I know three brides' houses where we will get something good."

"What do they give, for goodness' sake?" I asked, as we stumbled down the rocky trail.

"Oh, *chapatis* with lots of fresh goat butter, and sometimes cottage cheese. They'll have rolls of cloth, and the wealthy will have bracelets or other things to give the bride and her family."

"And everyone in Hunza marries on this day?"

I had heard this before, but hadn't realized how strange it was.

"Yes, Hazoor. Then day after tomorrow all the bridegrooms go to the Mir's Tumushuling celebration, and there's a big dinner and the Mir gives each one a present, usually a little cloth. Sometimes a young fellow

gets in trouble with a girl and her father makes them marry quickly"—he giggled lecherously—"but such marriages are a disgrace to both families and then no one gives presents."

By this time we were into Aliabad settlement, and as we passed a bride's house a man actually handed Musa Beg a chapati topped with a large hunk of butter. I restrained him from leading us by a round-about way which would take us past two more parties, and we followed the main trail to his home settlement of Durkhun. Here I paid him and we parted. He had been a good man, not very intelligent but willing to work. I continued on into the Hyderabad settlement.

Soon I passed another bride's house with several happy young fellows in the gateway. I was wearing the white Hunza choga and hat, and they couldn't see my face for the gathering dusk. The bridegroom handed me a chapati with a generous lump of butter, which I accepted with thanks and a blessing on his house. A man called out, "No, no, that's the American Sahib!" But the bridegroom replied cheerily, "That's all right, he's a Hunza brother anyway!" I walked on, warm in the winter night. It had required a long time and much patience to earn that remark.

The clatter of my horse's hoofs on the rocky lane approaching the castle set off a great commotion. I could hear boys shouting to each other, then the rattle of many feet down the outer steps. As I entered the courtyard, there was perfect silence. A sudden burst of moonlight showed all eight marshalled into a rigid line, with Sherin Beg out in front. "Salute Karo!" he shouted, and all hands came up to foreheads, palms out. I flashed a return salute, then they broke and swarmed about me just like American high-school kids, and I felt really at home. Beg always did love a parade.

Hayat brought me his accounts the next morning. He had kept them in Urdu, so he read them to me and I transliterated into English in my big account book. Hamid, the boy from Khaibar, had come during my absence, and Hayat had issued him the clothing he needed. The cloth I had sent by pack horse from Gilgit was being made up into pants and shirts for the whole school by a young Hunza who had once worked for a tailor in Gilgit. Hayat was tired and worried from the responsibility. As he reported, I realized that he had assumed authority and met every problem as it arose, without hesitation. The school was operating smoothly and the boys under his care were well and happy.

We had only six regular patients that morning because everyone was celebrating marriage day and too busy to be sick. Then a brisk little

old lady with snapping black eyes stuck her head in the dispensary door and released a volley of rattling Brushuski at Hayat, who was helping me. "*Awa, Awa, Api!*" he answered smilingly, (Yes, yes, grandma!) and turned to me.

"Sahib, this is Api, servant to the old Rani who lives here in the castle. The old Rani's eyes are sore; will you meet her in the passage-way outside and treat her?"

When I said I would, Api's head jerked out of sight; a moment later Hayat and I met the Rani and Api in the entry between our two apartments. For me to have gone to her house, or for her to have entered mine, would be unthinkable. The two old ladies were short, dark-haired, and wholesome as a pair of winter apples. I put some boric acid in the old Rani's eyes, which were tired from too much embroidering, and she returned to her rooms. But not Api! She went over to the outer door, which was completely blocked by my boys staring in at the whole performance. Clucking vigorously, she buttoned an open collar here, pulled a loose cloak tighter there, and dealt one impudent cheek a resounding smack.

I shot an inquiring glance at Hayat.

"Sahib," he chuckled affectionately, "Api has decided that we need a mother, and there's nothing we can do about it!"

"Good!" I agreed. "But see here"—turning to Api and the boys—"you and Api can work little things out as you choose, but she must not cook for you! She has enough work to do for the Rani, and I won't have any of you passing your work off onto her." They chorused a promise not to, but Api walked off grumbling in Brushuski that they were just a bunch of boys who wouldn't be properly fed if someone didn't take care of them.

So now our school had a housemother, too. This was the best thing that could possibly have happened. Api, I knew, was loved and respected by everyone in Hunza. Her husband and her son had disappeared thirteen years ago when a Communist assault swept over the caravan trail on which they were traveling, near Kashgar. She was not poor, but she had enlisted as the old Rani's servant in order to have someone to care for; the two ladies were now firm friends. But this whole group of boys would fill Api's need for someone to mother as a companion never could. She would also give the boys the kind of care and affectionate scolding that I certainly never could. She had been Api, "Grandma," to all of Hunza so long that everyone had forgotten her real name.

The cold of early winter gripped Hunza completely; today was raw

and cloudy, and last night had been bitter with the temperature around zero. Wide cracks in the plank flooring of our two finest rooms, the dining room and my office, made them impossible to keep warm. We therefore borrowed two large black goat-hair mats from the Mir, spread them on the mud floor of the old inner-castle room, and Hayat, Beg, and I moved in there. From now on, we would be living like any other Hunzas. The smoke kept our eyes a little sore and we had to wear our overcoats even here, but otherwise it was not uncomfortable. I was beginning to develop beri-beri, because the need for vitamin pills was greater than I had anticipated. After I rationed them out to the boys and gave what was needed to my patients there were none left. Beri-beri isn't too uncomfortable the first few weeks—one's hands and feet are always cold and always asleep—and I knew I could get more pills in January, so I was not greatly concerned.

I tried unsuccessfully to learn from Beg and Hayat just what the marriage ceremony was like. They had seen marriages, they said, but nothing really happened. Sometimes a priest was called in; the village chief was usually present. Apparently the ceremony revolved about the young man's going to the bride's house and publicly escorting her back to his home, thus consummating the unwritten but binding agreement between the two families.

The evening of December eighteenth, following Marriage Day, was Tumushuling. This was the great celebration of the Hunza year. To these people it represented a combination of our Thanksgiving Day and Fourth of July. At dusk the Mir, Ayash, little Bapu, and the old Wazir arrived in state at the castle. My outfit lined up in the courtyard and saluted, then I accompanied them inside, after being puffed with smoke and dabbed with flour as at Genani last June. This time we waited for almost two hours, bundled in our white chogas in the audience chamber, while the Mir's servants prepared an enormous meal somewhere in the depths of the castle. Then we went down to a huge room, strictly old-style Hunza with mud floor and heavy beams which, strangely enough, I had never seen before. The floor was jammed with at least a hundred men and boys who scrambled to their feet as we entered, opening a narrow pathway for us. The Mir led us to a fine rug, on which he and I sat, with Ayash, Bapu, and the Wazir beside us. A Coleman lantern hanging from a peg above our heads threw garish white light over us and flames in a mud fireplace cast flickering shadows at the other end of the dark room.

The servants brought in great platters of chapatis, meat, and rice,

with plates of butter. This was the Mir's traditional feast of harvest and thanksgiving, in which his people were to share. Seated before us were the village chiefs and bridegrooms from the main oasis, plus as many other men as could possibly crowd in. We ate a long, hearty meal in this room filled with the continuous deep buzz of voices speaking in soft Brushuski. For the first time, the white expanse of faces turned toward me was actually friendly. As each man whose eye caught mine gave a companionable smile, I knew that I was being accepted. Maybe within a year or so I would actually be considered a Hunza.

When the last man had leaned back satiated, a stir of anticipation ran through the room. Five slim, dignified men grouped themselves before the fireplace. Ayash Khan hunched close to me.

"Now, Sahib," he purred softly, "you will hear the traditional song in honor of our dynasty. It is a very long song, because it tells the story of Hunza for more than six hundred years. Since our people have no writing, this is the way we preserve our history. It is an honor to us, from our people, and a way of offering thanks for this feast our Mir Sahib has given. I will translate it for you as they sing it."

"And it is also traditional that the song will not be finished," the Mir chuckled into my other ear. "You'll see—I may even have to stop a fight!"

The song began, a low crooning chant in minor key accompanying a single soft, wailing falsetto tingling with the mystery of old Asia.

"In the old days," the quiet whisper behind my ear gave substance to the sound, "the Rajah of Gilgit ruled this whole country from Gilgit to Mintaka Pass, and all Nagir, yes and Ishkoman and Yasin, even to the borders of Chitral and Yaghistan. He held the power of a king on this earth, and he also had power, through his knowledge of magic, over djinns and devils and spirit. But he was an evil man, whose strength made him greatly feared . . ."

The king made it his custom to eat the flesh of a suckling baby, killed each day, the song continued. This was a sore affliction to his people, but they were powerless to stop him. He himself had but one child, a grown daughter who kept her own counsel. Then one day a young Prince and his faithful courtiers rode into Gilgit, exiles from Persia. Soon the Prince and the king's daughter fell in love. She told him of her father's magic powers, and explained to him that this magic could not withstand fire. So the young Prince arranged a great Tamasha,* and secretly at

*Tamasha—a big celebration, such as the one we were enjoying at the time.

night he and his servants dug a deep pit near the evil Rajah's door. The next night everyone came to the Tamasha bearing a torch, as the Prince had directed. They pretended to have a great riot. When the Rajah came rushing out to stop it, he fell into the pit; quickly the Prince and all the people threw their torches in upon him and he was utterly consumed. Then the Prince and Princess married, and ruled Gilgit well. According to the legend, one of the Prince's nephews became the first Mir of Hunza, another the Mir of Nagir.

The epic song continued through the history of Hunza, king by king, for almost twenty minutes. When it still had at least two hundred years to go, a flurry stirred one corner of the listening crowd, and a half a chapati sailed through the air at the chanting choir. In a flash, gobs of butter and torn pieces of chapatis were being hurled in all directions. The singers tried to dodge and keep chanting but this was obviously impossible, so they ended with a hasty flourish in honor of Jamal Khan, the present and greatest embellishment of his family tree, then snatched up some butter and returned the barrage.

The Mir and Ayash chuckled with enjoyment of this excellent brawl until old Momayr, a local character, received a large chunk of butter directly in his eye. With an outraged bellow, he rose and started for his particular rival. The Mir hastily stood up, which brought everyone to his feet and stopped the performance before it could get out of hand. The royal party left for the palace, and the various guests trooped back to their villages through the dark. Tumushuling had started; the traditional festivities would continue through the night and the next day.

Custom required that every household have a party on this night, so I had arranged a real Tamasha for my boys. We had Hunza wine, apricots, and raisins, and I had hired four members of the Royal Band to furnish us with music. I didn't, of course, like the idea of giving wine to boys, but it was traditional that at this feast even small children be allowed to have a drink. Prince Bapu and his eight-year-old cousin asked to be allowed to come, and naturally we said we'd be happy to have them. Their six adult servants made things a little crowded. By ten-thirty everyone had danced several times and the party ended. I saw all of the boys safely to bed before crawling wearily into my own cold bedroll.

Beg shook me awake in black darkness and I looked at my watch:
4:30 A.M.

"Outside, Sahib!" he called as he poked Hayat, "The Fire Tamasha is beginning!"

I jerked my clothes on and hurried onto the roof. Fires spangled the darkness below, matching the stars in the black sky above. Glowing faggots arched trails of sparks from fire to fire like comets, as people threw blazing sticks at their neighbors to commemorate the first Fire Tamasha more than six hundred years ago. The celebration lasted until dawn, when everyone went to bed to rest until noon. That afternoon we all attended a big Tamasha with dances in the Mir's palace yard. Three or four brief fights broke out, because everyone in Hunza was mildly exhilarated with wine. The Mir and Ayash were much amused. "That was a good one!" the Mir exclaimed happily when a beautiful right hook knocked one combatant flat. It was, and the whole celebration was rugged, lusty, and eminently human.

Between Tumushuling and Christmas Day I settled down to running my school and treating medical patients. Since the boys had never seen a real woodcarving, I smoothed up a panel of mulberry wood and started to carve a floral design. Mulberry is a beautiful, golden wood. Inlaid with dark brown walnut, pale tan apricot, and touches of red juniper, we would have a good range of colors without using any stains. The boys became much interested as the design developed, especially when I started to inlay. Beg, Hayat, and Suleiman Khan spent every spare minute crouched beside me, watching and occasionally helping. Although the panel never reached completion, it served its purpose. All of the boys now realized the goal toward which they were working. Hayat promptly started an inlay project of his own, a mulberry pipe.

Hayat was doling out food to the school and relieving me of other details. I thought his duties were giving him no trouble, until one day he came to me for help. "Sahib," he said angrily, "I'm tired of arguing with those boys! At home they are used to having meat only once a year, but now you're feeding them they won't eat anything else. Hamid has taught all of them to refuse when I say they must eat chapatis and potatoes and carrots, too!"

This was an impossible situation, so I called a durbar and issued a set of rules and food rations. I was greatly disappointed in Hamid, who had told me he wanted to learn, last autumn. The rules were the ordinary ones of discipline regarding theft, disobedience, and fighting. We also had a rule that any boy could entertain his father or brother as guest of the school for one day and night, but more distant relatives were not permitted. By Hunza custom any relative, no matter how distant, is entitled to your hospitality for several days. Since most of these people were related to each other, I might have found myself feeding all Hunza.

Hamid's second cousin, for instance, had recently dropped in on us and stayed three days.

I then explained to the boys that, because food was expensive and very hard to obtain in winter, we would have to ration some foods. They promptly surrounded me, put their arms around me, and said that if "we" were short of money they didn't want their ten-rupee monthly pay and could do with much less food. Their generosity touched me: why hadn't I been able to get enough money to give them all they wanted of the foods they craved?

The rationing system I was forced to establish was austere, but the boys thought it generous. Each would receive one twelfth of a pound of sugar and one heaping teaspoonful of tea per day, one half-pound of rice, and just under one pound of meat per week. They could have all the wheat flour, salt, potatoes, carrots, and dried apricots they wanted. We would all have milk and eggs when we could obtain them. It worked out to about two eggs and a pint of milk per week per boy. Pears, apples, grapes, and mulberries we would have abundantly in season. Onions, beans, pulse, pepper, and candy from America we would have whenever possible, which was seldom. The boys were very happy because their diet at home included no sugar, eggs, or rice, very little salt and tea, wheat flour only in the autumn, and meat only at Tumushuling time.

A few days later several men of Baltit objected to the way I was feeding the boys.

"Sahib," old Nasar told me, "apparently you don't understand growing boys. If you feed them all that rich food you'll make them *musth* (passionate). The right way is to keep them hungry—then they stay nice and quiet!" I politely but firmly rejected his gratuitous advice. Since the real reason Hunza people don't eat more is that there isn't any more to eat, this counsel was merely a combination of jealousy and rationalization.

On the day before Christmas the mail donkey arrived from Gilgit, bearing a whole assortment of gifts. There was one big box from my family, two of chocolate syrup from the Glen Ellyn Methodist Church in Illinois, candy from my friend Carl Johnson in Pittsburgh, and a box of cookies from relatives in Illinois. Beg and Hayat rejoiced at the sight, but the other boys paid little attention; they had never tasted candy or cake. Half an hour later, stuffed to the gills with sweets, they thought Christmas boxes the most glorious idea in the world. That evening we had a real Christmas Eve feast of roasted yak meat, potato chips, custard, and the cake and candy from America.

While we washed dishes, Hayat came to me quietly. "Sahib, if you need our help in paying respect to your Issa, we'll help you. But if you would rather worship alone, we'll let you be." I thanked him and said that for a little while I'd like to be alone, but most of Christmas must be shared to be properly observed.

Christmas Eve I spent in the tradition of our family. I put lighted candles in the windows of the old audience chamber to welcome the Christ to my house, and recited the Christmas story from Luke. Then I went out on the castle roof and sang every Christmas carol I could remember into the cold night wind. At such times one can feel the company of others the world around, and the loneliness is not difficult to face.

Christmas morning dawned bright and still; clear sunshine pierced the thin air and warmed us. Ayash Khan arrived after breakfast, bringing me Christmas greetings and presents from the Mir and his family. He laid across my arm a white choga and hat of homespun wool and a fine knitted ibex-wool sweater. I gave him some of the food from America and three rolls of Kodachrome film for the Mir's movie camera. Just at noon, Hayat came to me.

"Sahib," he reported, "the schoolmaster and a group of boys from the Agha Khan's Middle School have come to pay their salaams on your Christmas Day." I hurried to the door to meet them. I had celebrated Tumushuling with them, so Hunza was now observing my Christmas customs with me!

I ushered the master and eight teen-agers into my office, the old audience chamber. They stood in a semicircle facing me, each in his long, white cloak. At a nod from the schoolmaster, one boy silently handed me a package of raisins, pears, and nuts. Then another laid in my hands a paper, inscribed with scrolls and flourishes:

*The Masters and Boys of
His Highness the Agha Khan's
Middle School
Wish the Very Reverend
Doctor Clark
"Merry Christmas"*

For a moment it choked me. Then I looked at the circle of friendly, happy boys, all proud of the real Christmas card they had given me, and knew that I need never again feel really lonely in Hunza. I thanked them fervently, and had them sit on the floor while I gave each boy a pencil

and an American cookie. I also was able to give the schoolmaster money to buy a sheep and have a party for the whole school.

Then the schoolmaster told me that his boys wanted to play a game of soccer with mine, so we all hurried down to Baltit polo field, taking with us one of the soccer balls I had brought from America. The boys played barefoot, which should have broken their toes, but didn't. When everyone was tired, the Middle School boys went home and my boys and I returned to our castle to enjoy the winter sunshine on the roof.

It seemed that people could not do enough for the Christian in their midst. The Mir and his family had a big Christmas dinner for me that evening—undoubtedly the first time Christmas had ever been celebrated by a Hunza royal family. We ate in the family dining room, a cosy place with a fireplace and a big, red rug on which bolsters and thick cushions were scattered. A servant spread a white cloth on the rug and we all sat around it, leaning against the cushions and bolsters. The Queen and all the children ate with us because, as the Mir explained, "You are our brother and a member of the family, so it is perfectly proper." This was the greatest honor that a Muslim king could bestow.

We had a mutton pilau, with several side dishes of differently spiced meats, and green tea; for dessert, the Mir's own special pudding. It is a very stiff fondant, with more butter than fondant, and is always served cold with gold or silver leaf spread over the top. You eat the gold and silver, which does not alter the flavor, with the pudding.

After dinner the Mir remarked that I had seen the Hunza dances, and it was now time to show them some American dances. I am a very indifferent dancer and there was no music, but I sang my own accompaniment and managed to give them an American waltz and a Navaho Indian dance. The waltz left them unimpressed, but the Navaho dance was an immense success. The Mir shouted "*Shaboshi!*" (Well done!) and the children laughed until they rolled off their cushions.

As I climbed back to my castle, tired and happy, I thought what a kind thing all of Hunza had done for me. From the royal family to the schoolboys, they had taken the trouble to learn about my Christmas and to make it a happy day for me. I wondered if any Moslems in America would find Christian friends to help them celebrate Id-ul-Fitr.

Medical work, like the other problems of daily life, continued through the holiday season. The grey, raw weather was responsible for many new cases of bronchitis, and living in smoke-filled houses increased the number of irritated eyes. However, right after Tumushuling, people



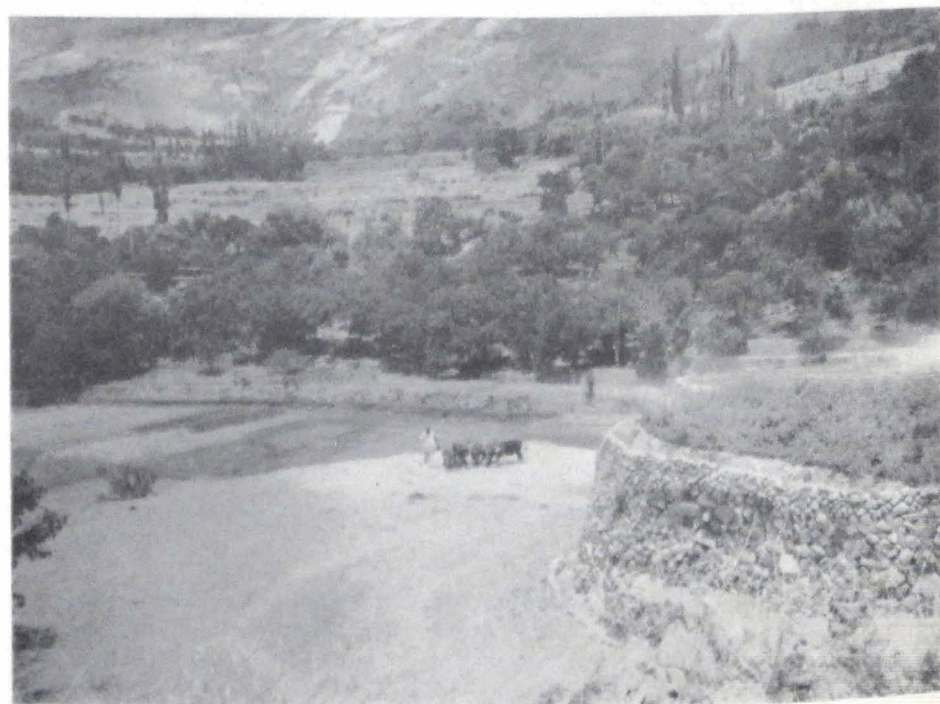
1. AFTERNOON IN ULTAR—THE CASTLE'S "BACK-YARD" VIEW ; THIS AWE-INSPIRING VIEW IS ALSO TO BE SEEN IN PICTURES 12 AND 16.

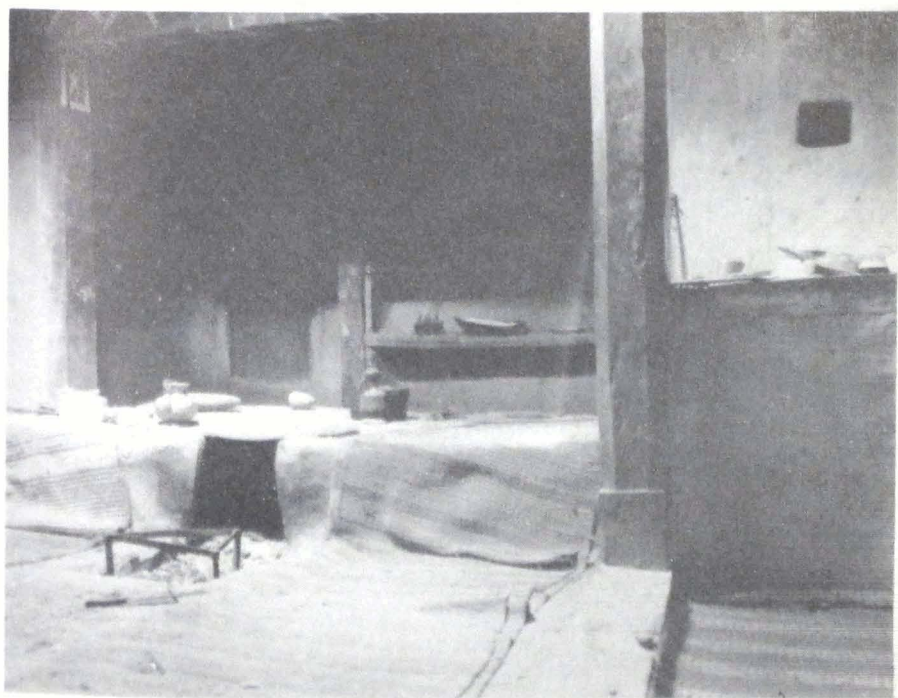
Photographs by the author except the last picture, taken by an Australian friend.



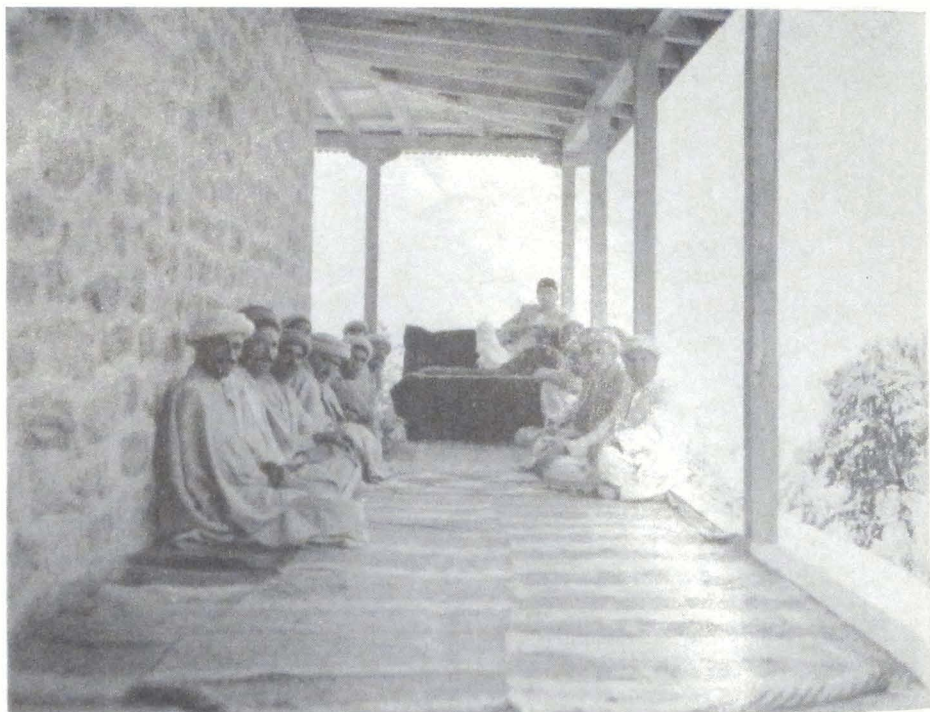
2. MY BALTIT NEIGHBORS' ROOFS, DOTTED WITH DRYING ALFALFA, THE PALACE OF THE MIR LIES ON THE DISTANT RIDGE BEYOND THE BARREN CEMETERY.

3. A FARMER OF BALTIT THRESHING BARLEY. HE HAS BORROWED CATTLE FOR THE PURPOSE, FOR NO ONE PERSON OWNS THIS MANY COWS IN HUNZA.

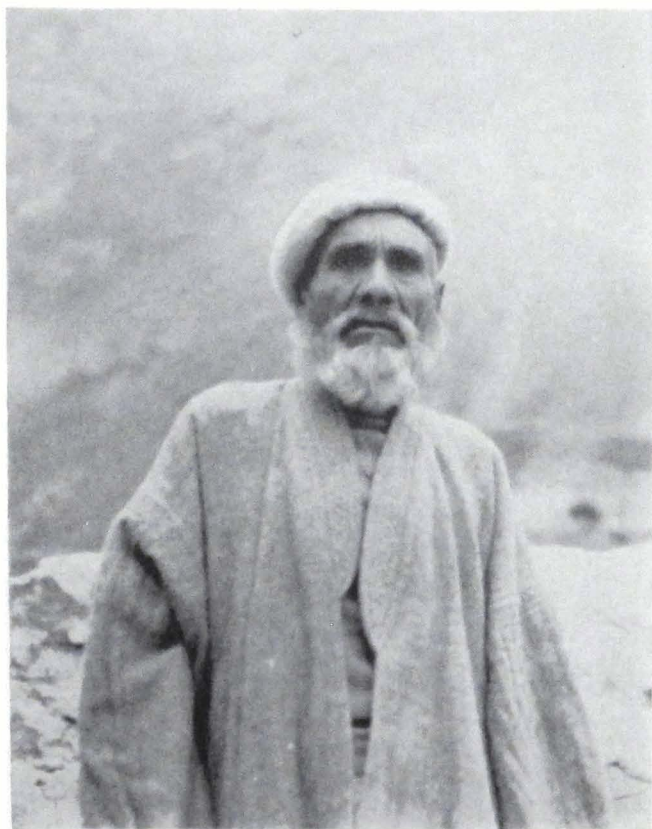




4. *Upper.* FACULTY OF THE AGHA KHAN'S MIDDLE SCHOOL, BALTIT. THE BLACK-COATED GENTLEMAN IS BABU JAN, HEADMASTER AND MY BOYS' RELIGIOUS ADVISER. 5. *Lower.* THE MAIN ROOM OF A WELL-TO-DO HUNZA HOUSE. THE DECORATIONS ON THE BEAMS ARE DAUBED ON WITH FLOUR-PASTE. GOAT-HAIR FLOOR MATS ARE POSSESSIONS OF THE WEALTHY.



6. THE MIR
AND HIS COURT.
THIS PORCH IS
THE REGULAR
COURTROOM.



7. A PATRIARCH OF
KHAIBAR—BURHAN
SHAH'S FATHER.

8. BUYAL SINGH,
FATHER OF
SHERIN BEG,
WITH THE
YOUNGEST SON
OF THE FAMILY.



9. SHERIN BEG'S
COUSIN BRINGS
FIREWOOD FOR
WINTER OUT OF
THE MOUNTAINS
FOR HIS HOUSE
IN BALTIT.

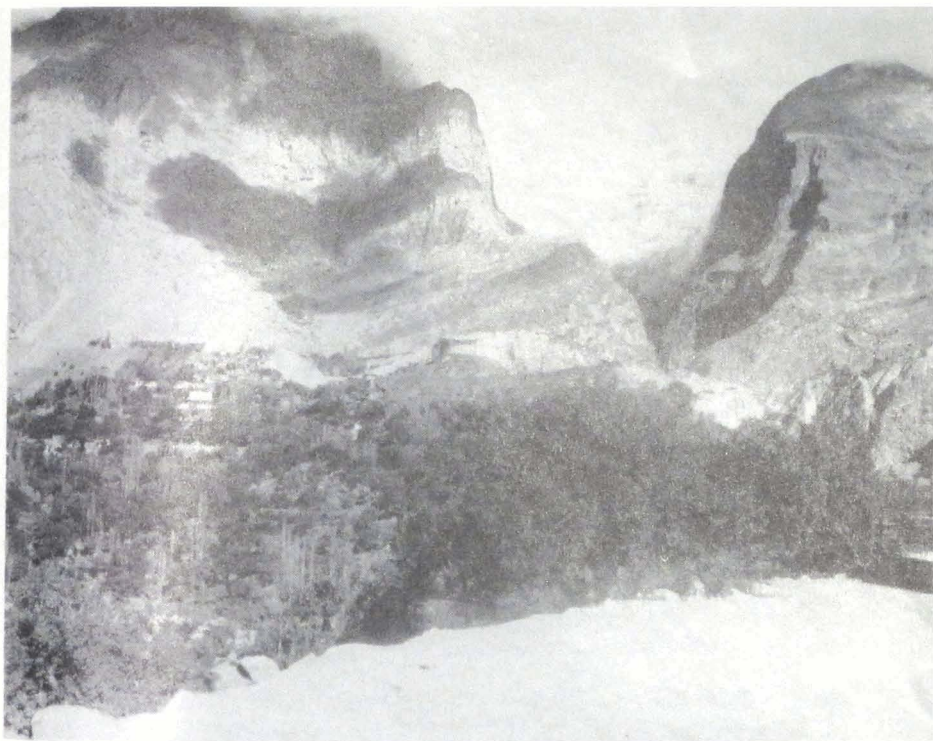




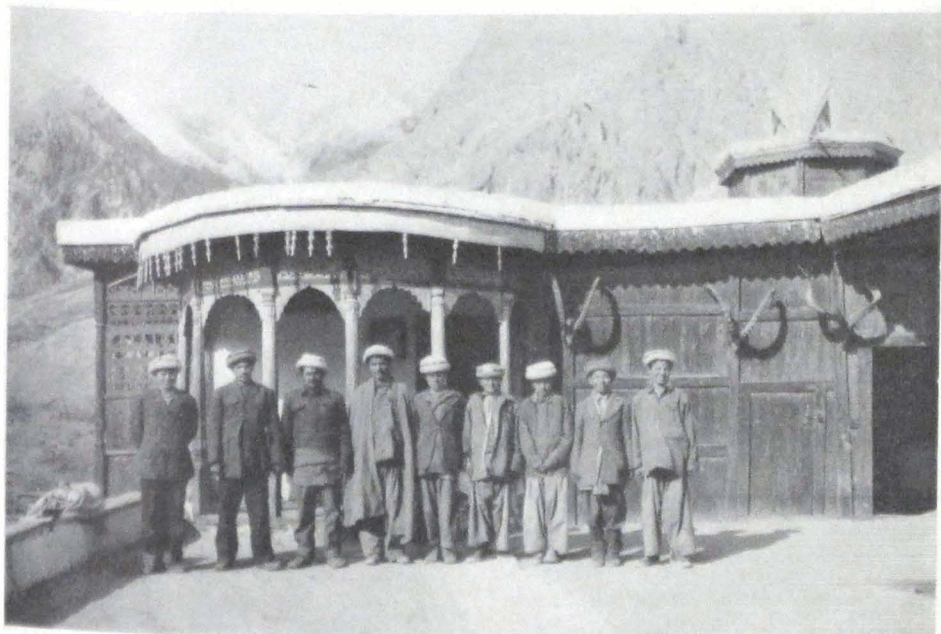
10. THE MAIN OASIS OF HUNZA, WITH WHITE-CAPPED RAKAPOSHI IN THE BACKGROUND; THE SUMMER VIEW FROM MY CASTLE.



11. DECEMBER CLOUDS ROLL INTO HUNZA, BRINGING SNOW TO THE EDGE OF THE UPPER FIELDS; IN THE VALLEY'S SETTLED REACHES SNOW RARELY FALLS.



12. MY CASTLE PERCHES ON A HILL AT THE MOUTH OF ULTAR NULLAH, WITH BALTIT SPREAD BELOW. THE TREES ARE APRICOT, MULBERRY, AND POPLAR.

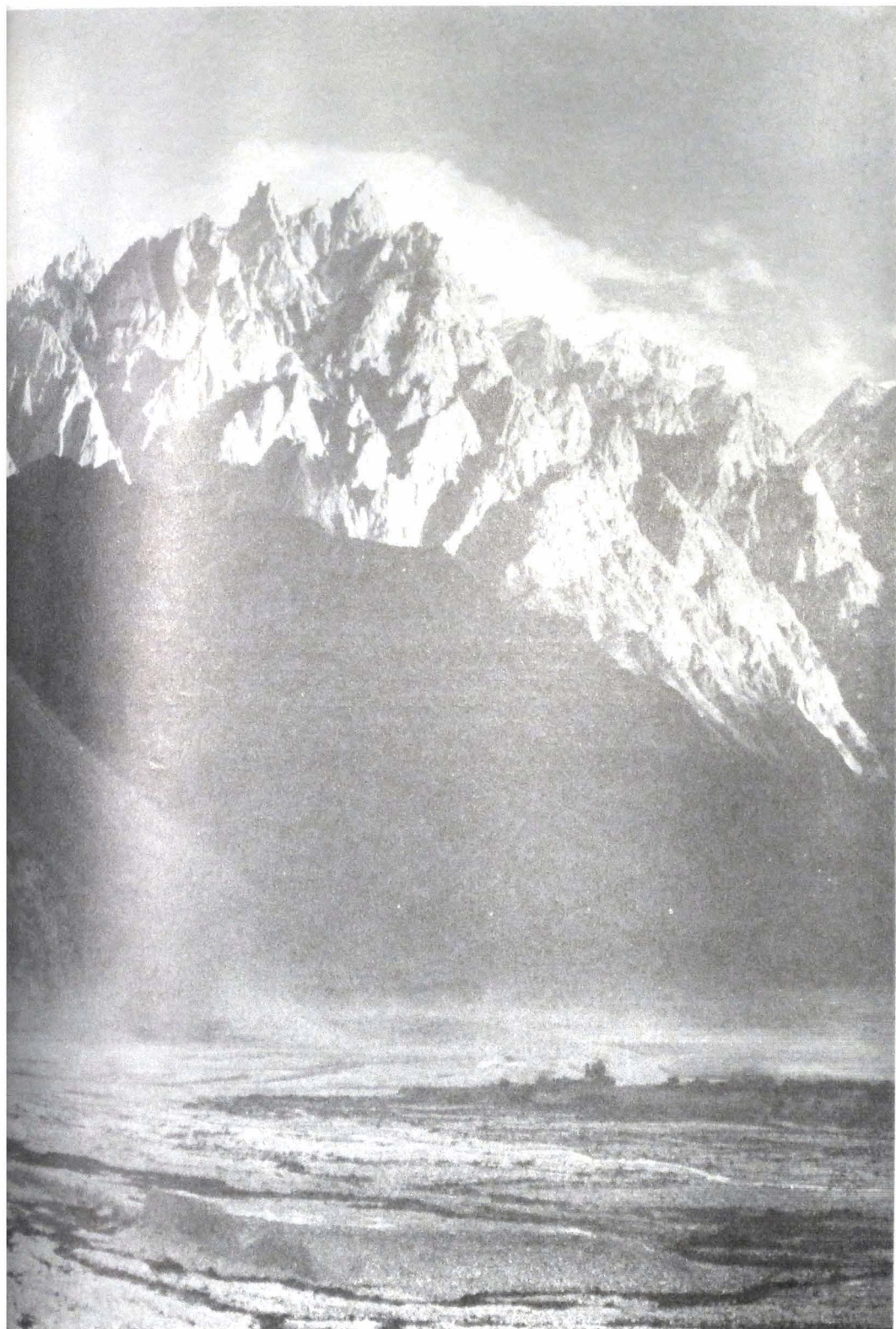


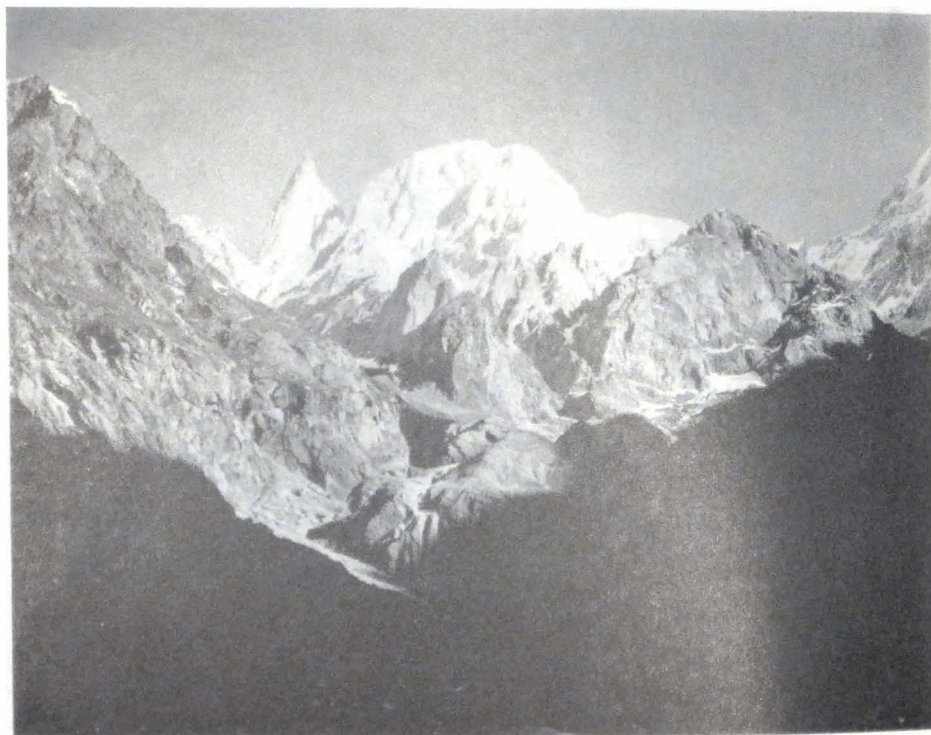
13. MY STAFF, DECEMBER 1950. LEFT TO RIGHT: GOHOR HAYAT, SHERIN BEG, RACHMET ALI, BURHAN SHAH, SULEIMAN KHAN, NASAR MOHAMMED, GHULAM RASUL, MULLAH MADUT, NUR-UD-DIN SHAH.



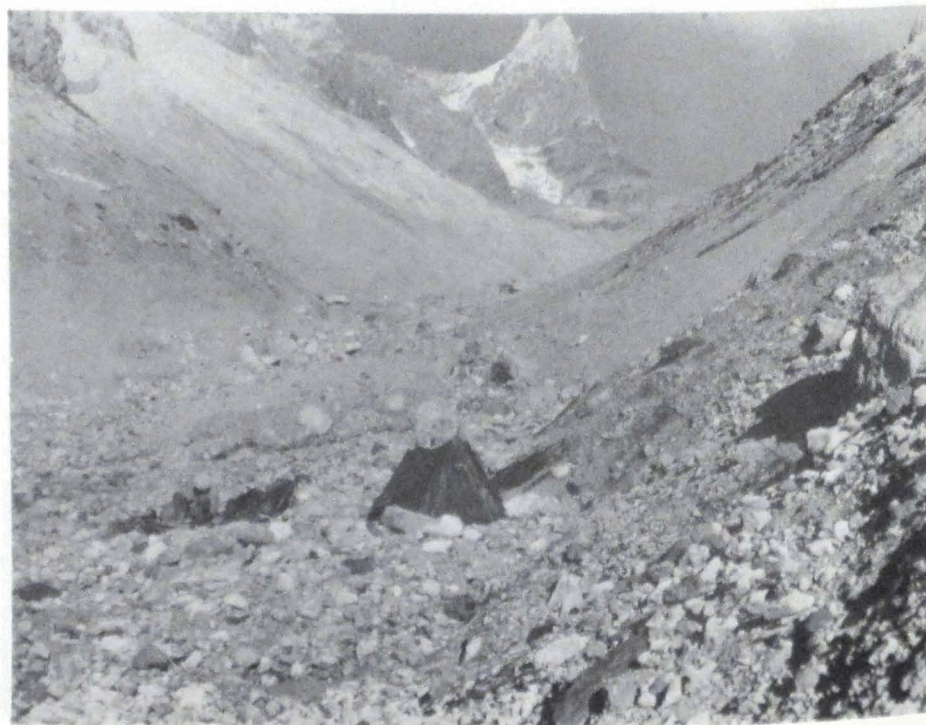
14. PASU LIES IN THE SHELTER OF KARUN PIR.

15. KARUN PIR. OF ALL THE MOUNTAINS, THE
MOST MAGNIFICENT AND MOST INACCESSIBLE.





16. MY BACK YARD: ULTAR PEAK, 24,700 FEET, IS THE ROUND-TOPPED MOUNTAIN; THE NEEDLE IS BUBELIMATING. 17. *Below.* HUNTING FOR VALUABLE MINERALS AT 14,000 FEET. BURHAN IS COOKING BREAKFAST. THE SMOOTH SLOPE IN THE UPPER LEFT IS ICE MANTLED WITH GRAVEL.



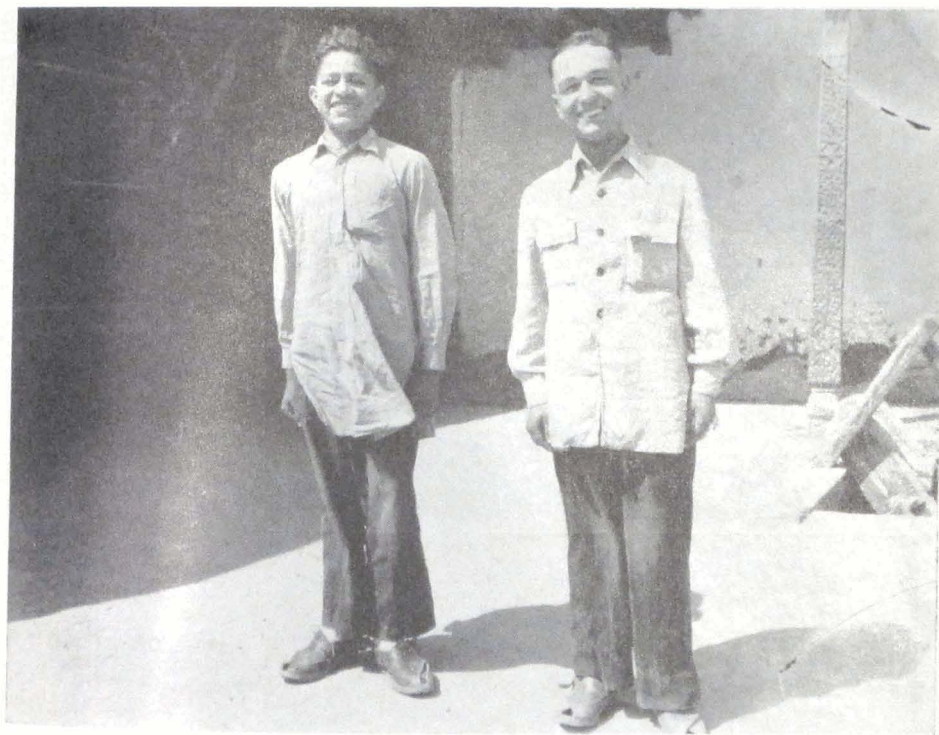


18. PEAKS OF THE GHUJAL, ABOVE KHAIBAR. 19. *Below.* BUTCHERING A SHEEP OUTSIDE THE COOK HUT ON THE ROOF OF THE OLD CASTLE. BURHAN IS INFLATING THE INTESTINE SO IT CAN BE CLEANED FOR TRIPE.

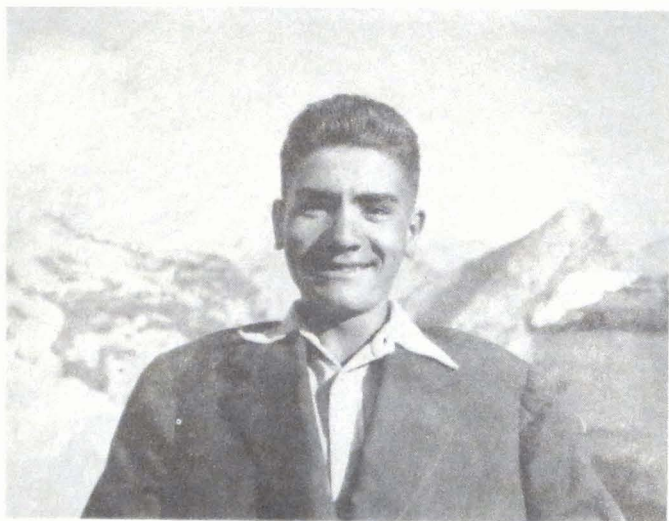




20. TWO GOITER PATIENTS, WITH A BOTTLE OF LUGOL'S IODINE FROM MY DISPENSARY. THEY WERE CURED WITHIN A MONTH. HUNZA IS ON THE VERGE OF A SERIOUS IODINE DEFICIENCY. 21. *Below.* SULEIMAN KHAN, AT THE LEFT, AND A FRIEND.



22. GOHOR HAYAT, AT THE LEFT, IN HIS WORKING CLOTHES, WITH A FRIEND. 23. *Below.* SHERIN BEG IN HIS BEST WESTERN CLOTHES, WITH THE MODEL AIRPLANE HE MADE AND TIGER, THE MASCOT OF THE HANDICRAFT SCHOOL.



24. BURHAN SHAH.



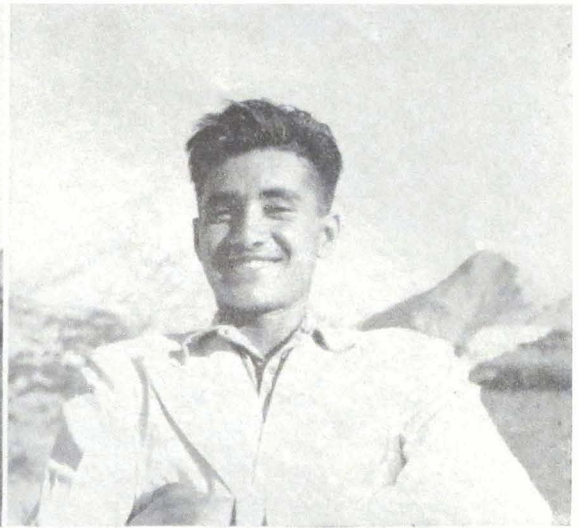
25. MOHAMMED HAMID.



26. NASAR MOHAMMED.



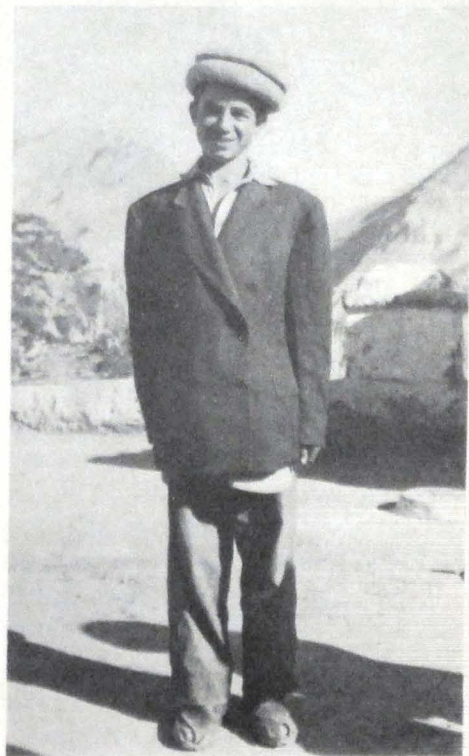
27. RACHMET ALI.



28. MIRZA.



29. GHULAM RASUL.



30. NUR-UD-DIN SHAH.



31. THE AUTHOR, AT THE RIGHT, SNAPPED PAUSING WITH AN AUSTRALIAN COMPANION, ON THE SCREE OF AN ALMOST VERTICAL AND DANGEROUS ROCK WALL TO BE CLIMBED.

began coming with very sore stomachs, but no other symptoms. This puzzled me at first, until I learned that Hunza people used oil of bitter apricot nuts to flavor their wine. As a test, I drank a bottle myself, and developed a terrific stomach ache. The medical problem was solved: people who use prussic acid for bitters must expect a little gastric distress.

Meanwhile, old Mohammed Rufi was becoming increasingly impossible as a carpentry teacher. I entered the schoolroom one afternoon to find him seated on the floor, again holding a board between his feet while he pushed a saw through crookedly with his hands. The sawhorse I had made him build stood gathering dust in a corner. The boys, of course, were learning to do things Mohammed Rufi's way. I went hastily down to the palace and told the Mir my problem, and that I must have someone who would teach the boys properly.

He thought a moment, then sent a servant to the unfinished section of the palace. In a moment the servant returned, leading a tall, slim, beetle-browed man of about thirty-five. This, the Mir said, was Mano, one of the palace carpenters. He would be free to work for me two hours a day, and I was free to hire him on any terms on which we agreed. Mano listened very attentively while I outlined the job to him. Then he said that the pay was very generous; he would be willing to work for much less, because it was a privilege to teach Hunza boys a craft.

I returned to the castle and fired Mohammed Rufi, very gently because he had tried his best. The next afternoon Mano took over. At last we had a teacher whom, I hoped, the boys could respect and I could trust. I must have a staff to whom I could delegate authority, because my project was more than a one-man job.

Immediately after Christmas, Sherin Beg and I took a three-day prospecting trip to Gershwin, east across Hunza River from the place where I had located beryls six weeks before. The beryls did persist, but the zone of rich pegmatite disappeared under the snow a few hundred yards back from the river. While I was on this trip, the Pakistan Government telephoned a request to Baltit that I collect a few pounds of garnet for testing; they had become interested in my proposal for a garnet-sandpaper project. This was important. If the project should be approved, it would be a source of income to Pakistan, and would give employment to at least fifty local people. The garnets were all under snowdrifts, but I knew exactly where they lay and could burrow down to them. I took Burhan Shah for cook-assistant, so that Sherin Beg wouldn't miss more school, and we collected garnets all one day. The

Murtzabad garnet locality is unusual because pyrite as well as garnet is disseminated through the schist there. The pyrite weathers to sulfuric acid, which leaches the schist and frees the garnets, so that tons of them lie loose on the surface. The acid also leaches deep into the mountainside, loosening rock which falls in dangerous landslides. We returned to Baltit with both our horses exhausted; they were obviously too old for the work I was doing.

Immediately upon my return I told the Mir that I needed new horses. He announced to his court that I was in the market for horses, and the fun began. The first horse to arrive was a sturdy, well-built black, but the horse didn't weigh five hundred pounds. Then came a weary, saddle-galled white. One man brought an emaciated bay that might fatten into a good pack-horse which I bought in desperation for 220 rupees. Finally I had the Mir telephone to Ghulmit to send a messenger to Gershwin after a fine chestnut I had seen there. The horse arrived at dusk; I bought it for 320 rupees, and Sherin Beg was jubilant. He fondled it all over, rubbed down its legs, blanketed it carefully, then turned to me.

"This is my horse!" he announced defiantly. "His name is Akbar, and I am going to care for him!"

"He can be all yours, Beg!" I told him. Beg was generally so bashful that such a speech meant he was deeply moved.

Next morning a man from Aliabad brought a tall, slim, elegant Badakhshani stallion that was just what we wanted. I ignored my depleted finances and bought him, too. The boys, of course, glowed with joyous pride at our beautiful mounts, but I had more serious considerations in mind. Only with the best horses available could I hope to maintain my rigorous schedule, doing twice the work the Pakistan Government expected of me. We would now have the problem of selling Bili, Kashgabai, and the starving bay, but I had the horses needed for the job.

One of Hayat's distant relatives bought old Bili for one hundred rupees. I felt like a traitor selling old Bili, but there was no food available for a retired horse. Haibatullah later sold Kashgabai and the bay to his Turki friends in Gilgit, so we didn't come out too badly.

The holiday season ended with a bang. On January sixth, just a week after Bapu's birthday, my morning dispensary was interrupted by a magnificent earthquake. A deep subterranean rumble sent all of us running out on the castle roof. Then came three hard shocks a minute apart, with continuous waves between. The old castle swayed and

creaked. It was so flexible that it was practically earthquake-proof. As the earthquake stopped, the really spectacular scene began. Tremendous avalanches thundered down every nullah, and for five minutes we lived in a continuous rumble. The great snowcloud from the avalanche in our nullah boiled out over the mouth and flanks. I timed it coming down on us at sixty miles per hour, a wild, tumbling mass of cold air and powdered snow two thousand feet high. When it struck, the castle shivered again, and we had to lie flat to avoid being blown off the roof. The clouds hung low, and the white snowcloud rolled down out of the dark gray storm clouds like swift death. What a magnificent place in which to live, with such spectacles every year!

My holiday had included the festivals of Tumushuling and Christmas, the deep satisfaction of watching the school begin to function properly, and a little time in which to read my Shakespeare and do some woodcarving myself. Now it was necessary to make a trip all the way out to Karachi, to renew my American passport. This would be a total loss of time but it couldn't be helped. Sherin Beg and I left Baltit on January seventh for Gilgit.

A plane was finally able to break through the winter storms and carry us over the Himalayas on January fifteenth. I stopped at Rawalpindi to deliver garnets, sandpaper samples, and reports to the Ministry for Kashmir Affairs, and at Lahore to buy molding planes and Arabic-Urdu Holy Qurans for my school and vitamin pills for my beri-beri.

Renewing my American passport took only three days, and the Pakistan visa less than two hours. During this time, I bought a jeep station wagon for the Mir of Hunza to use in Gilgit. The Agha Khan's Karachi headquarters paid for it out of his account with them. The Agha Khan had given the Mir a Buick for use in down-country Pakistan. This station wagon would be used only when the Mir was in Gilgit, about one week of each year. I couldn't help thinking that the jeep was costing more than all the schools in Hunza for a year.

After a delay due to weather on the return trip, I landed in Gilgit on February seventh. Sherin Beg had brought the horses down to meet me on February first, and was patiently waiting at our headquarters with Haibatullah. We had a rough trip back, with bad weather, landslides, overloaded pack horses, and influenza-pneumonia patients in every village along the way. Renewing my passport had cost a full month's time.

CHAPTER XVI

The Boys Establish Their Pace

AS I stepped into the schoolroom, the boys chorused, "Sahib, come see what I made while you were away!" I went from boy to boy, exclaiming with real pleasure over the neat, square-cornered boxes that were emerging from each pile of sawdust and wood scraps on the mud floor. Meanwhile, Mano, the new teacher, sat quietly in one corner; his work had been well done, and he had dignity enough to let his results speak for themselves. When I told him that I had brought the tools he ordered and was very pleased with the boys' progress, his thin, somber face broke into a smile.

"Sahib, this is work that I love to do," he said. "Years ago the British let me go to a carpenters' school in Kashmir, and I have always wanted to teach our Hunza boys, but until now I never had the tools or money."

"Well, you're doing a fine job of it," I assured him. I went up to my apartment, thinking that an excellent, dedicated teacher had been wasted. How many other Hunzas, I wondered, smothered such professional talents because they were tied to their rocky farms?

We held a durbar in the schoolroom the next morning, seated cross-legged in a big circle on the floor with the cloudy sky shedding a gray light down on us through the smoke-hole in the roof.

To my question of how things had gone during my absence, Burhan replied that Hayat and Beg had had one fight. Embarrassed, Beg snapped back that Burhan and Nur-ud-Din likewise had fought. Quickly it developed that Hayat had also battled with Nasar Mohammed and Suleiman. None of these fights did real damage, because the other boys broke them up immediately. I realized that the scraps were caused partly by normal irritations, and partly by the boys' resentment of any authority except that of their own fathers. However, some of the trouble certainly arose from the fact that Hayat was overworked and worried and a little too harsh in his speech. He was beginning to learn the unpleasant, lonely side of being in command, which bruised his friendly spirit considerably.

I told the *durbar* that I knew no more fights would occur, and that therefore punishment was unnecessary.

Then we turned to more practical problems. Hayat, I was disturbed to learn, had worked desperately to keep the school in food. The Mir had left for a vacation in Karachi on January twenty-fifth, and after that his servants had not issued Hayat the wheat ration the Mir and I had agreed upon. Rachmet Ali, our buying agent, was supposed to handle all such matters, but he took no action. Hayat assumed complete command in the emergency, sent Rachmet Ali twenty-three miles to Ghulmit for wheat, and personally scoured the Hunza oasis for other food. Running the whole organization was much too heavy a responsibility for the boy. Although he had done a magnificent job, he was thin and nervous.

In an effort to set up a system that would function in my absence without placing all the load on Hayat, I reorganized as follows: Rachmet Ali to do all of the buying (he promised to keep the school in supplies *without* being told); Hayat to keep accounts and superintend supplies; Beg to issue rationed supplies to the school. Mano was to act as superintendent of the school whenever I found it necessary to leave on trips.

Everyone seemed happy, but immediately the new system broke down. Beg's compliant spirit did not suit his job. When the schoolboys, sparked by Hamid, asked for meat, sugar, and butter far in excess of their rations, Beg gave in to every request. Hayat had to reassume issuing of rations. Rachmet Ali never bought a single apricot on his own initiative, so I had to place Hayat officially over him. Rachmet Ali was slipping in other ways, too. He was supposed to take care of the horses, but their daily grooming had degenerated into a hasty brushing-off which left them filthy and endangered their health. Mano, on the other hand, ran the school so competently that I was little needed, and could spend my afternoons on geology, reports, and studying the Hunza language.

What an aggregation of personalities had gathered under my roof! Nasar, the chowkidar, represented the worst of old Hunza—outwardly servile, inwardly scornful, completely immersed in custom and resentful of change. Mano was an anomaly: a man already middle-aged who realized the need for progress and was willing to go against tradition in order that his people might grow. Rachmet Ali was the best of the old, honest and loyal, but happy to be a servant, and incapable of change. Beg, I feared, was too much like him, a conformist to the end. And Hayat—he was the hope of his people, young, eager, willing to learn any new thing that promised to be helpful.

The night after our second reorganization I lay awake trying to determine, from my own experience, what basic ideas had inhibited these and practically all other Asiatic people. Likewise, what opposite ideas have made the West free to advance? Gradually, as I tried to analyze them, the welter of incidents I had experienced fell into six groups: six ideas that must be broken if these people were to be unshackled.

First and most significant is the personal approach to all of life. The job, the problem, or the idea is of no importance compared with one's own relationship to the job. Thus, for example, the facts that our horses' health was absolutely indispensable to my operations and that I obviously knew more about horses than Rachmet Ali, would not for an instant condone my caring for them myself. The practical necessity was secondary to the basic premise that horses' care is beneath a Sahib's dignity. It is impossible to comprehend how this attitude permeates every moment of Asian existence until one has lived with it for many months.

Second is the family system, with its concomitant ideas of nepotism and filial respect. In a grimly competitive world, where there is little justice and no charity, one's family becomes one's only protection against injustice and poverty. All other families are competitors and potential enemies. Therefore, it is logically proper to secure for the family all of the good jobs within reach. I knew that whenever I sent Rachmet Ali out to buy something among the poor people of Hunza oasis, all of his own clan, the Drometing of Baltit, would be given first chance to sell; if Hayat was purchasing agent, he would buy from his clan, the Hakalakutz of Altit. The difference between them was that Rachmet Ali maintained family loyalty the whole way. If no Drometing had what I wanted, he would tell me it wasn't available. Hayat, being progressive, had learned that business was business, and if he couldn't strike a fair bargain with another Hakalakutz, he would buy from anyone else in the oasis.

Just as bad as nepotism is the "Rule of the Family Elder," which arises from a close-knit family with the father or grandfather as absolute head. Since the old man is steeped in custom, any suggestion of change or experiment is a challenge to his authority. A progressive young man must either yield, or risk being expelled from the family, from hope of owning land, and from hope of honorable marriage. Thus the elders become a serious deterrent to progress.

The third damaging idea, the delegation of authority, grows out of this filial respect. Men do not follow their own consciences or rely on their own judgment. They delegate decisions to the Mir or king, to the body of custom (*dastur*), or to God, as represented by their usually

erroneous concept of the Holy Quran. Thus the farmers of Gircha were satisfied to watch the river wash their farms away because first of all, the Mir hadn't come to their village and ordered them to divert the river; secondly, no one had ever tried to divert the river—it wasn't *dastur*. If God willed that they lose their farms, who were they to challenge Him? In fairness to the Holy Quran, it must be realized that this last has absolutely no basis in that commendable document.

Fourth is pure selfishness. Cooperation never extends outside the actual family. The Mir might organize and enforce a community project, such as repairing a ditch or feeding a famine-struck village, but there was no spontaneous effort. No one in Hunza, and few in all Asia, have ever conceived of themselves as participating members of a large group, on whose welfare their own depends.

The fifth inhibition is the habit of learning by rote. It is, of course, easier to teach children to memorize than to reason, and teachers who are unqualified people steeped in authoritarian tradition naturally turn to rote. I found men who could recite at least half of the Quran, and yet were unable to understand a word of what they said. Arithmetic, geography, languages and history were all learned by heart, every boy reading each page aloud, over and over until he could recite it.

Finally, there is the social system which makes dishonesty the best policy. In a highly competitive and unorganized community like Hunza, social disapproval is the only restraint which makes dishonesty unprofitable. If it is the approved local practice to lie, graft, and steal, then the dishonest man has the advantage over his honest neighbor, but his dishonesty makes further development impossible. My Hunzas, for instance, could not let one man with a horse take his neighbors' produce to market at Gilgit, because they could not trust each other that far, so everyone must go to Gilgit individually and everyone lost time and money in the process. Hunzas were more honest than most Asians, but their code was so lax that it was impossible for them to carry on even their minor trading with Western efficiency.

These six ideas I must combat through my school. My boys had already shown that they were eager to be taught.

Apologists would rank poverty, poor health, and lack of education as inhibiting factors. Personally, I respected the Hunzas too much to grant them these excuses. Ignorance and poverty were symptoms, not causes. One need only compare the Hunza's barren huts with old Swiss wood-carvings and fine craftsmanship to see that inhospitable mountains and lack of education do not necessarily destroy men's spirits. The eager boys

gave living proof that only custom and tradition were restraining Hunza. Once the bonds of their own forging were removed, nothing could hold back these people.

I worked several afternoons writing a "guide-book," *Useful Minerals in the Gilgit Agency*. Mr. Mueen-ud-Din, the Political Resident, had made the request so that government officials would recognize any useful mineral deposits they might see in their travels. The idea that mineral prospecting in a complex area could be learned in this casual fashion was wonderfully optimistic, but I wrote the book as clearly as I could.

On February twenty-second, just two weeks after my return, I had to travel down to Gilgit to survey the placer gold possibilities of the Agency. Hayat would be in charge again, but this time Mano would superintend discipline in the school, and Rachmet Ali clearly understood that he was to carry out Hayat's orders as promptly as if I myself had given them. I had also asked the Mir's servants to turn over wheat to Hayat according to the Mir's orders.

On this gold-prospecting trip I took Burhan Shah, who was eager to see the world. As he was sixteen and only in the second grade he wasn't due to learn much more in school. His first contact with civilization would be of much greater value educationally. I rode Badakhski, with my bed and the mountain tent strapped on behind my McClellan saddle, and the horse blanket, with nose-bag and halter rolled inside, strapped on in front. I carried my pack, with the skillet, hatchet, two cups and plates, soap, and my clean clothes. Burhan rode Akbar, with his bed and horse blanket rear and front like mine. In his pack he carried candles, matches, currycomb and brush, flour, tea, sugar, salt, and his clean clothes. We were, at last, a highly effective mobile reconnaissance team. I reflected as we rode that good food and care certainly showed in the horses' general health. I was feeding four *seer** of corn and twelve *seer* of hay per head per day, and grooming both of them thoroughly every night. Our horses were the envy of the Agency, including the numerous people of all social classes who sneered at me for stooping to care for my own horses.

Burhan was much more of a conversationalist than Sherin Beg, but he wasn't nearly so practiced at purchasing and cooking when we reached towns. Also he didn't ride as well as Beg, and felt a little scared about

* One *seer* equals about two pounds.

crossing the high *paharis* (trails built across cliff faces on rickety wooden brackets), as he wasn't used to looking vertically downward five hundred feet or so from horseback.

In Nomal we stopped at Niet Shah's caravanserai. Although the spring famine was beginning, he had some extra food. I ordered three maunds of wheat and one of rice to be taken to Baltit and delivered to Hayat at once, telling him that the situation was desperate and the boys needed food. Burhan wrote Hayat a note stating the price of food and delivery agreed upon, and we gave it to Niet Shah. Payment was to be cash on delivery; one does not pay in advance in Asia. I felt greatly relieved; over three hundred pounds of grain would keep the schoolboys alive until I returned, even if Hayat could get nothing else.

As we approached Gilgit we met a jeep along the road. Burhan's eyes nearly popped out, and he leaned over so far watching it that he actually fell off his horse. The rest of the way into Gilgit he was growling "gr-r-r!" and swinging his arms in wild circles, which may have simulated jeep wheels but badly confused the horse.

It had been winter in Hunza, but the lanes of Gilgit were sprayed with the tiny shadows of new leaves. Beneath its spring blossoms, Gilgit was seething with excitement. Colonel Ata-Ullah, the Health Officer of the Azad Kashmir Government, had brought in several reels of movies and a portable projector. A show was to be held that night in the Gilgit Scouts' barracks, the first movie in Gilgit history.

We arrived early and helped arrange the barracks hall. The place began to fill twenty minutes before dusk; by dark all the folding seats were taken, the window sills and aisles were jammed, and scarcely enough room was left for Colonel Ata-Ullah to run his projector. We saw Prime Minister Liaquat Ali Khan's visit to America, the Calgary Stampede, and Mickey Mouse. During this time people had been unobtrusively wedging themselves in the door until the projector and Colonel were pushed so far up the aisle he could no longer operate. We moved the whole show outside, and saw a comedy, the surrender of Japan, and a good but complicated picture on malaria control. The colonel had displayed admirable understanding in selecting his mixture of films to teach health, loyalty to Pakistan, and friendship for the West, plus Mickey Mouse.

Burhan sat through the whole show completely fascinated. I whispered enough explanations to help him understand what was going on. As we walked home, he spoke in awed tones of the naval cannon and bombings, and asked me if American mice could talk. Burhan was dis-

playing wonder and intelligence, but he hadn't yet learned analytical curiosity. He never thought to ask how the pictures moved; he saw the machine, and machines could do strange, magic things, so he accepted the whole situation. It would be my task to teach him to question and to reason.

Two days later, Hayat called me on the telephone from the Mir's palace.

"Sahib," his voice squeaked at me from the ancient receiver, "Have you sent food? We have used our last, here, and can get no more!"

"Didn't Niet Shah from Nomal bring the wheat?" I asked, amazed and angry.

"No, Sahib."

"The spring famine is here in Gilgit, too," I told him, "and there is no wheat or sugar in the bazaar, but *somehow* I'll get you food!"

I hurried to the bazaar, found a Hunza man there, and sent him to Nomal at once with a very strongly worded message to Niet Shah ordering him to take the food I had bought up to Baltit immediately. A week later, Hayat telephoned that the food had arrived. By meal-to-meal buying he had managed to avert actual hunger. Heartlessness to foreigners I could readily understand, but such calm disregard as Niet Shah had shown for the welfare of his own people was difficult to accept.

In the meanwhile, I had given the mineral guidebook to the P.A. to be forwarded to Mueen-ud-Din, and had planned out my survey. I would start at Chemugar and Parri, and follow the Gilgit River up to Dunyor. Thence I would follow the Hunza River to its sources. I would estimate volume and tonnage of gravel in every bar along the two rivers for the total distance of one hundred miles and would pan out representative placer samples with my skillet. This was a hard, routine job, but if I could report paying qualities of placer gold my prestige with the Pakistan Government would be much enhanced and a new local industry could develop.

Burhan and I took the horses on the ferry across the Hunza River at Dunyor and rode slowly down the trail to Chemugar. Here it was full springtime; a pink cloud of apricot blossoms, pierced by graceful, yellow-green fronds of new-leaved osiers, rested over the oasis.

We stayed for two nights in a rest-bungalow belonging to a pair of suave, servile brothers. They were both in the employ of the officials at Gilgit. The people in Chemugar were mostly Pathans from Swat, with glaring eyes, beetling brows, heavy beards, and evil hearts. I treated more than thirty of them for various diseases, but that didn't stop them

from pointing their fingers at me and repeating all manner of gossip as I walked through the village.

Burhan and I worked along the north side of the river the first day, measuring and mapping gravel bars. The next morning we crossed Chemugar bridge and started east down the main trail toward Parri. A kindly sergeant from the Gilgit Scouts gave us a lift in his jeep, to Burhan's intense joy. He sat in the front seat, next to the driver, his dark features visibly glowing with happiness but saying not a word. On the return hike that evening, he watched over his shoulder the whole way for a possible jeep to materialize.

We moved thankfully out of Chemugar to Oshkundas, the next oasis upstream, which was populated chiefly by Hunzas. During the night a howling, cold wind and gray sky temporarily brought winter back. In a bitter, driving drizzle we climbed down to the river and watched a team of four Sheena gold-panners at work. All of their equipment—shovels, carrying bowl, sieve, washing flume, and concentrating bowl—was made of wood. They handled about one ton of gravel per day, and the whole team averaged about ninety rupees per month; they were probably losing fifty to eighty percent of the gold.

Burhan and I worked on downstream to pick up our gravel-bar survey from Chemugar. In fording the mouth of Oshkundas Nullah, we had to strip, tie our clothes around our necks, and wade hip-deep in rushing ice water for about thirty yards. Our feet slipped on smooth boulders, rolling cobbles struck our ankles, and ice beat against our ribs. We came out bitter cold, our skin stung crimson. If either of us had really fallen, he would probably have been washed into the main stream and killed, but with two together it was fairly safe. We clasped wrists while crossing and each steadied the other when he slipped. Burhan regarded all this as good fun, laughing at my chattering teeth. Apparently he was impervious to cold.

At Dunyor, our next base of operations, we were most welcome guests of our Hunza farmer friend, Rahabar Shah. His comfortable guest room offered a warm refuge from the cold days along the river. We measured the gravels of Gilgit River to the junction, then five miles up Hunza River, freezing our hands in panning samples as we went. Then we returned to Gilgit to pick up supplies and start for home.

We left on a day of breaking spring clouds, cream-yellow and puffy, with patches of bright blue sky. The orchards near Gilgit were shady with new leaves, but as we followed upriver toward Nomal they became

billows of blossoms, pink foam on the crest of the green wave of spring that was surging up Hunza canyon.

We made good time, measuring gravel bars as we went, for the first half of the trip, but at Chalt we delayed an entire day because thirty-two people came for medical treatment and I had not the heart to turn them away. One father led his little girl to where I sat on the dak-bungalow veranda. Her face was terrible to see; one eyeball was blind and scarred, and the other oozed bloody pus down over her cheek. I gave emergency treatment with sulfas, and turned to the father.

"Take this child to Gilgit at once! They may be able to save the sight in this one eye."

"No, Sahib," he said firmly, "we will not go there."

"Why not?" I asked.

"Because I took her there six months ago when her first eye became sore, and the doctor did nothing for her," he replied.

"Why don't you take her to the compounder at the government dispensary here in Chalt, then?" I asked.

"Because the compounder himself told me he has no medicine that will help her. Only your medicine cures us, Sahib, and when you aren't here there is no one to care."

I was caught again by the pressures that were wearing me out! Nine boys in Hunza depending on me for education and food . . . people here and in every oasis going blind, dying of pneumonia, suffering with diseases I could cure . . . the economic future of the region dependent on my surveys . . . I *couldn't* do it all! Cases like this came to me almost every day. If I didn't treat them, people sickened, went blind, or died. If I treated them, I was accused of lessening the prestige of the Pakistan Government. Actually, if the Agency Surgeon, Dr. Mujrad Din, with his excellent medical education, had traveled up into this region, my medical work would have been reduced to occasional first-aid. I knew, as these poor people could not, how gladly the Pakistan Government would have supported any efforts he might have made. He had but to requisition and modern equipment and medicine would have been sent to replace the dangerously antiquated remedies at the local dispensaries.

I finished the main gold survey in short order. Briefly, I had to report that the average gravel bank consisted of three-foot boulders with interstitial sand and gravel. Only the very largest dredges would be able to handle these boulders, but they could not operate in the river because it was too small and its gradient too steep. Also, the river was so difficult to control that hydraulic mining was impracticable. I could only

recommend that placer work be done on a limited scale, using the smallest possible machines. All this was a double disappointment to me: first, a possible local resource was not practicable, and second, a negative report is displeasing to a government, no matter how accurate it may be.

Burhan and I returned to Baltit on March fifteenth to a smoothly running household. Mano was teaching the boys to make chairs. Under Hayat's orders, Rachmet Ali had bought enough food to supplement the grain I had sent from Nomal. Hayat had kept his accounts correct to the last anna. The boys were adjusting to each other; there had been no more fights. Everything was going well physically, but I knew that I must spend more time with the boys. Mano could teach them carpentry, but only from me could they learn to abandon deep-seated tradition and adopt new attitudes.

The first day I spent clearing up details and planning. The dispensary must start again at once; the room had gathered dust. I'd no sooner dragged the rugs outside than Rachmet Ali hastily marshaled the younger boys (the older ones had already left for Middle School, which started earlier than Primary School) to help me. The demands of tribal custom!—I could have done it better alone. When Hayat and the older boys returned from school that afternoon, they all scolded me. It seems the Baltit people below the castle had been horrified to see the Sahib shaking rugs, and the incident was now the talk of the village. If the Hunzas would draw the logical conclusion, that my comparative "wealth" was the result of my willingness to put my hand to any kind of work, all would be well. But of course they wouldn't, and the boys were right. Such education must be done slowly. I had made another mistake.

It was still cold in Hunza. The earliest buds had not yet opened, but the breeze carried the soft touch of spring. The schoolboys were sleeping in their room, and I still slept inside because the roof was too cold at night.

The Mir was to arrive on March nineteenth from his winter vacation, and Hunza prepared a proper welcome. All my boys dressed in their cleanest clothes (laundry had been neglected during my absence), and everyone but Sherin Beg walked to Hyderabad to pay respect to the Mir. The farther one goes to meet an oncoming traveler, the more honor one does him. Beg and four of his relatives spent the morning on the castle roof practicing a flag dance. One of Beg's ancestors had carried the standard of Safdar Ali, the dynasty founder who came from Iran six hundred years ago, and the flag-bearing privilege had remained with his family ever since. It was typical of Hunza's primitive tribal structure that

this family, economically one of the poorest, should be able to retain a noble social position through its hereditary status and its good character.

Beg wore a gaudy cloak of wide green and yellow stripes for the occasion, and old Nasar, who was his distant cousin, dressed in scarlet. They bore large flags of brilliantly colored cotton, all of totally different pattern, which fluttered and snapped as they whirled through their dance.

The royal procession reached Baltit at about one-thirty. Bapu came first, on a black pony, led by Ayash Khan, then the Rani and younger children, riding yaks. The Rani, properly veiled, was dressed in a shapeless black cloak, but the forty female servitors who followed her on horseback flashed red and green and white in their brightest clothes. After a proper gap in the parade, the Mir appeared riding on a white horse, followed by his train of servants. Three rickety arches made of poles, bearing a large "Welcome" (in English) greeted him. He dismounted and walked slowly forward, while his old men crowded in to bow and kiss his hand. No returning father ever received a more fervent greeting from his children; it was a deeply affecting scene. As the procession approached the Palace lawn, Beg's family broke into the flag and sword dance, with cloaks and flags swirling to the wild music of rejoicing flutes and drums.

My boys had made forty metal saucer-lamps for the occasion; that evening we put a little of the precious American linseed oil and a hand-made cotton wick in each, and placed them on the parapet around our castle roof. We scarcely had them lighted when a similar row of lamps outlined the Mir's castle, whereupon lamps and fires bloomed through the dusk over the whole sweep of the oasis. The Agha Khan School boys staged a torchlight parade and there was general rejoicing because the king was home again. My boys felt very proud that their fires were first. Fire means much to the Hunzas; it probably was of major importance in their pre-Islamic religion.

Official New Year's Day was March twenty-first. Hunza celebrates three of the solar dates: Noye Roz (New Year) on the vernal equinox; Genani (barley harvest) at the summer solstice, about June twenty-fifth; and Tumushuling at the winter solstice. There is no observance of the September equinox, possibly because it does not coincide with any harvest or significant weather change. They also have Bopau, a barley-planting celebration, which has no relation to the sun, on January 28th.

On New Year's Day, the Mir, Ayash, I, and the usual crowd of village chiefs had an official lunch on the castle roof, then adjourned to the polo ground for general festivities. It was rather like a Sunday school

picnic. The men and boys seated themselves along the stone walls and on the slope above the polo ground, while the ladies, in their brightest clothes, clustered higher up the hill like a myriad of resting butterflies.

The first event was an archery contest, shooting from a galloping horse at marks set in the ground. No one scored better than a near miss, because archery was distinctly a thing of the past in Hunza; everyone now owned a matchlock musket or, more recently, a Pakistan Army rifle. Several of my boys took turns riding Akbar and Badakhshi full speed up the polo ground. They were very proud of our horses and of the Western-style riding I had taught them. I saw with pride that they rode with more grace than anyone else that day.

Then the schools staged a series of Western-style races which the teachers had learned from the British. The third main event was a Hunza dance, done in turn by the leading men of each village. As each group of five or six men circled the field, gracefully leaping, twirling their *chogas*, and gesturing with their long sleeves in time with the complicated rhythms of the orchestra, I marveled again at Hunza music. The carefully tuned kettledrums were carrying the melody. They not only set the beat, they led the orchestra, establishing the mood and introducing the theme. The wind instruments and strings merely furnished accompaniment. A brief, boring polo game brought the entertainment to a close, and we returned to our respective homes.

At bedtime Sherin Beg asked me to be sure to wake him before dawn, so he could rouse the others in time to dress, wash, and go to the prayer house for dawn prayers. This was something new. I questioned the boys and learned that our school had "got religion" during my absence. Fortunately their religious adviser was a schoolmaster and priest called Babu Jan, a middle-aged gentleman whose gentle tolerance belied his deceptively harsh, hatchet-faced countenance. He read Arabic, Persian, Turki, and Urdu, and had read the Quran in Arabic and the Bible in Persian and Turki.

Dawn prayers were the only service in the Ismailia Church. They consisted of a quiet gathering of those who cared to attend. Babu Jan led them through the formal prayer and recital of Sura Fatiyeh, then gave them a brief religious discussion, and the service was over. The Ismailia sect prayed but twice a day, not five times as do most others, and many of these hard-working farmers prayed only on Fridays. They could, of course, pray at home, in their fields, or anywhere else they wished, but attending the morning service was rightly regarded as a valuable religious experience. One morning when I waked Sherin Beg,

he said "Not today, Sahib. Yesterday I had evil thoughts and I am not fit to stand before God until I have freed myself of them. Tomorrow I'll go and ask His forgiveness." He regarded God as a deeply respected father to whom he could talk; he needed no more formality than the simple dawn service, and wisely his church did not burden him with ceremonies.

I had less time to work with the boys than I could wish, because my teaching was continuously interrupted by medical patients. Theoretically, the dispensary closed at noon to all but emergency patients. But what can one say to a young fellow with a fulminating infection in his hand, or to a man who has just brought three children, covered with ringworm, over eight miles of trail?

I planned to take each boy in turn with me on a short trip, in order to give them a little individual education and better to evaluate their capabilities. Hayat and Beg had traveled with me many times; I had learned from our gold-prospecting trip that Burhan had fine possibilities. It was now the turn of Nasar Mohammed, the fifteen-year-old boy from Pasu.

We spent our day panning the gravels near Hamatabad, eight miles above Baltit, for gold. We were unsuccessful, but I learned a good deal about my blunt, extroverted companion.

"You remember that I've been married four years?" he shouted above the roar of water as I washed a skillet-full of gravel. "Well, I've divorced my wife!"

"What on earth for?" I yelled back, startled at this revelation.

"I was going to be down here anyway, and she ate too much!" he responded.

Later I heard from neighbors that he had merely sent his wife back to stay with her family, and told me this tale because he thought it would please me. He remembered my comment that too-early marriages interfered with a boy's education. By the end of the day, I had a clear enough picture of Nasar Mohammed. Good at carpentry he certainly had shown himself—Mano had told me that—but a potential leader he was not. A streak of selfish practicality and clever evasiveness told clearly enough that this boy was out first of all for himself. He might learn a technique, but he would never gamble on learning a new way of thinking.

A few days later I took Nur-ud-Din Shah, the bashful boy from Kermin, with me to study the pegmatites on the ridge above Aliabad. He was too shy to ask questions and he never answered me above a whisper, but I felt his intellect at work. Evidently Nur-ud-Din could learn and

could be inspired to try new things. Whether or not it would be possible for him to overcome his shyness and accept responsibility was the only question. This would take careful work on my part. I must budget my limited time to Nur-ud-Din and Burhan, who could profit by it, and let Nasar Mohammed, who wanted to receive but not to give, find his own way.

Suleiman Khan, the blonde boy from Jutial, had already traveled with me up Jutial Nullah and on the three-day trip from Gilgit up to Hunza. I knew him for a boy with serious purpose and a merry sense of humor; Mano had told me that his carpentry was superior. I decided to learn more of Suleiman through watching his work, so I called him up to my office room one morning.

"Suleiman," I told him as we sat cross-legged on the floor, "it is time our school made a present for the Mir Sahib. I think an ashtray, made of one of those black yak-horns and set on a polished mulberry board, would please him very much." Instantly he was all attention, leaning over a sheet of paper I had given him and sketching out the ashtray. Hayat came in just then, and the two planned together. The golden mulberry base, they decided, would have an inlaid bow and arrow of aluminum foil, with a Muslim star of dark walnut. Suleiman demonstrated sufficient creative imagination and self-confidence to meet Hayat's strong character on even terms. It had been a conference; Suleiman was neither acquiescent nor defiant. Later, the two of them made the ashtray and we presented it to the Mir. He was pleased, and kept the tray in his office.

Ghulam Rasul, Hayat's young cousin whom I had admitted to the school in order that he might gain strength, had all too clearly found his own level. He was behind the rest of the boys in carpentry. Gradually, as they sensed his compliant spirit, they had fallen into the habit of asking him to run minor errands for them. Now he was cheerily fetching and carrying for everyone else, asking nothing of life but a friendly smile, unable to bring himself to forge ahead.

Hamid, the boy from Khaibar whom I had personally selected, had been a troublemaker from the first. He cleverly persuaded the other boys to ask for unreasonable things; small items disappeared from the other boys' kits whenever Hamid was alone in the room. Hayat advised getting rid of him, but I could not visit the consequent dishonor on his whole family without specific cause.

Having observed each of them individually, I wanted to find out how much group feeling they had learned in four months of living to-

gether, so I arranged a contest in marksmanship. One sunny afternoon we all carried the .22 and the big .30-06 to a safe place up Ultar canyon. I showed Hamid how to set up and change our toilet-paper targets; he ran the target butts while I superintended the firing line. Our four Brushuskis, Hayat, Beg, Suleiman, and Burhan, formed one team, and the three Wakhis and I the other. The final score was 8-2, favor of the Brushuskis. They kidded each other a little whenever one missed, but I could feel the team sense they had developed. At Christmas time they would have made harsh remarks and quarreled; now they were a family, not very good friends, but working together in harness.

Our team served Mano and the winners a big dinner of mutton, rice, potatoes, and bread at the table in my dining room, as a forfeit. I made a cake to pay my part of the prize. Only Hayat and Beg had ever sat at a table before. The others were quite embarrassed at first, but they learned rapidly. The experience imbued them with a little added pride.

One afternoon as I was writing a letter in my office, Burhan and Nasar Mohammed came tumbling in. A man from Altit was outside, they shouted, and he wanted to buy the mulberry table and chair the two of them had just finished making together. Were they permitted to sell?

"Why, of course!" I said.

"How much should we charge? Ten rupees? Twenty? Fifty?"—hopefully.

"No," I replied. "Let Mano set a fair price, then stick to it. *Do not bargain!*" The boys and their potential customers might just as well learn sound business practices from the first.

We all went down to the schoolroom. Mano inspected the chair and table gravely, then said, "Ten rupees for the chair and eight for the table." And so it was, after a little chaffing from the well-to-do Altit farmer, indulged in more out of habit than with any real hope of obtaining the furniture for less.

The whole school was in a state of exhilaration. All evening, Burhan kept murmuring: "Something we made ourselves, and it's worth eighteen rupees!"

Nothing more fortunate could have happened. This sale was a turning point in the history of our school. The boys suddenly realized that they weren't just servants carrying out a Sahib's whim, but young men learning a useful way to make a better living. The boys had come through their initial breaking-in; spring and the time of their greatest development lay ahead of them.

CHAPTER XVII

Gardens and Gardeners

MY last experience at gardening had been when, at the age of fifteen, I de-bugged potato vines for my father. Now it was spring, the gold survey was finished, and I must plant the American vegetable seeds I had imported to improve Hunza's food supply. The Mir kindly furnished a good-sized garden plot close by his palace. My boys enthusiastically volunteered to help, and I was expected to superintend a garden. How had Father planted those vegetables twenty-five years ago? It is one thing to discuss theories of agriculture, and entirely another to face seeds, earth, and eager helpers.

On a fine warm morning late in March we all went down to our garden plot. It had already been plowed and manured. The Mir's servants lent us a rake and heavy mattock-hoes. Our first job was to convince the Mir's white-bearded head gardener that we intended to plant our own garden in our own way. He wanted us to broadcast the seeds and irrigate by flooding the whole plot. Later, the only way to weed would be by creeping over our seedling vegetables, smashing the plants as we went.

I divided the boys into four gangs of two each, three pairs to spell each other on the hoes while Hayat and Nur-ud-Din took turns with the rake. In an hour they had the soil nicely worked. Then we used the hoes to build raised rows for planting, with ditches between for irrigating and fertilizing. We built the sunniest end of the plot into round hills for our cucumbers and melons. All this was as new to the boys as it was to the Mir's gardener, but they were eager to try the new ways where he was not.

I made one serious mistake. We planted everything three inches deep. The seeds were already a year old, and deep planting seriously retarded them. The lettuce, cucumbers, and most of the carrots never sprouted, but the rest came up eventually. Potatoes, melons, carrots, cucumbers, and peppers were not new to the boys. Most of them had seen tomatoes, and they liked onions, but couldn't raise them because of borers. A few Hunzas grew dry beans, but green and wax beans they had never seen. Our garden had a few rows each of beets, endive, lettuce,

radishes, turnips, spinach, yellow pear tomatoes, Brussels sprouts, and parsley. These were new to the boys.

As the plants developed, neither weeds nor insects bothered them much. Borers killed our onions, but we saved the cabbages and turnips by hand-picking the aphids and cabbage worms. The garden actually required very little attention once it was planted.

We irrigated once a week. The first time we irrigated, the boys appreciated the advantages of the row-and-ditch system over their old broadcast planting and flooding. None of our neighbors showed the slightest interest. It wasn't *dastur*.

We had to fertilize with dried sheep manure four times during the growing season. Actually, there is no true soil in Hunza. Our vegetables, like all Hunza crops, were growing in powdered rock, which the cool, dry climate has not weathered into plant food. All of the nourishment for crops has to be built in. Since the Hunzas have only manure for fertilizer, their crops receive enough nitrates but suffer a serious deficiency of lime and phosphates. The loose sand-and-rock mixture is so porous that irrigation washes out even the nitrates almost as fast as the farmers put them in, so four fertilizings per year are necessary. The yields of grain are never more than two thirds the yields per acre in the United States, and the yields of alfalfa are not over one-fourth, in spite of the careful hand-raising. Many of the fruit trees have red leaves at the branch tips, and show other signs of soil deficiency. Unlike the Nagiris, the Hunzas do not collect and handle their sewage for fertilizer. They usually defecate out in their fields, where sunlight and dryness tend to sterilize. The nitrates are thereby returned to the soil without spreading dysentery and pyoderma.

Hunzas have exceeded even the Chinese in their utilization of every square inch of land. I measured one terraced slope near Baltit in which the slope angle was 60 degrees—that is, the retaining wall for each terrace was about twice as high as the terrace was wide. Sometimes Hunzas actually create fields. They find a bare granite face with a slope not over 20 degrees, and at its foot they build a crescent-shaped retaining wall. They then turn in water until it forms a pond behind the wall, let the sand settle, drain off the clean water, and flood again. By repeating this for a year or two, a small terrace is formed. This is certainly the most desperate expedient of land-starved people anywhere on earth, yet visitors have written about Hunza as the land where everyone has "just enough" and there are no poor!

The climate is ideal for apricots, mulberries, and grapes. Hunzas

are good horticulturists. They have practiced grafting apricot trees for over sixteen hundred years. They recognize at least six local varieties of apricots on the main oasis, and know which varieties to use for strong roots and which to graft on for the type of fruit desired.

Apricots are harvested by sending children up the trees to shake the branches; the bruised and dirtied fruit is then picked from the ground. This system is chiefly responsible for the transmission of bacillary dysentery. However, it has one good effect. Americans must cut down fruit trees as soon as they grow too large to reach with ladders—after about thirty-five years. The Hunzas let their trees grow for fifty years, then top them about fifteen or twenty feet from the ground and let them grow for fifty years more. Each vigorous, fully mature tree produces a tremendous yearly crop. The trunk and main branches grow to be as large as forest trees. My woodcarving school cut some planks of apricot three by eighteen inches, twelve feet long, and we bought mulberry that measured fifteen feet. Apricot is a beautiful wood, and the yearly crop of fifty trees that could be cut for woodcarving without damage would be a real source of income to the community.

Hunzas eat the apricots fresh or dried, and crack the seeds open to obtain the almond-like nuts. The dried fruit is sweet, soft, and does not keep long, but each year's crop is consumed by the next April and the few weevils that one finds are only a minor nuisance. After all, one can always brush the weevils off before eating. The sweet apricot nuts are eaten plain. The bitter ones are ground with stone mortars, usually in well-worn holes on a nearby granite rock surface, and the oil is squeezed by hand from the resulting nut meal. This oil is highly poisonous. It is used for fuel in the little shallow saucer lamps, with a cotton twist for a wick.

Grapes are eaten fresh, or stored fresh during the winter (they shrivel a little, but stay sweet), or made into wine. The varieties raised in Hunza do not make good raisins, but this may be due either to the kind of grapes or to the method of sun-drying.

Mulberries are delicious fresh or dried. Since they ripen in late June, the first fruit after the long spring hunger, they are especially welcome and everyone gorges on them. If you go to visit, you are usually served tea, with a side dish of apricot nuts and dried mulberries as a confection.

Lack of wood for all purposes, but especially for fires, is serious and is rapidly becoming worse. The Hunzas use the tall, slender, fast-growing poplars for roof timbers in their houses, or buy pine from Nagir. Furniture usually consists of a few old boxes, and in the more well-to-do

houses a wooden bedstead imported knocked-down from the Punjab. Some people even have a folding wooden campchair, also imported.

There is no coal or petroleum in the entire Gilgit Agency, so wood must remain the source of heat.

The growing population has cut all the junipers around each large oasis below Ghulmit. Because of the dry, rapidly warming climate, few seedling trees take root, and those that do are eaten by hungry goats. The men of Baltit now climb the high cliffs in Ultar Nullah in order to gather wild-rose canes and sagebrush for winter firewood. Worse yet, they have started night raids onto Ultar Mountain, which belongs to Altit for wood and grazing, in order to get firewood. Inter-village trouble of this sort is brewing everywhere, and the Mir of Hunza cannot suppress it. A jeep transport system to bring wood to Baltit from the abundant juniper forests of Hamatabad might solve the immediate pressure until nearer mountain slopes could be restocked with juniper. These forests are not used at present because they are too distant.

Hunza is not favorable country for livestock, and the Hunzas, like most mountain people, are poor stock men. Horses are a luxury; they are not useful, except along the main trail, even as pack animals. Only those who are moderately well-to-do own a horse, and they underfeed the poor brute. If the community would own and maintain a single good six-horse pack caravan, with two men as permanent drivers, the entire flow of goods could be handled cheaply and effectively. I tried unsuccessfully many times to make the Mir of Hunza and the officials in Gilgit see this. It was my intention to organize a demonstration system and operate at cost, but I lacked the money for the initial investment.

There are not more than two dozen cows in the entire main oasis. There is no pasture within a day's herding distance of the settlements, so the cows must depend on leaves and straw for food. On this diet they give a few pints daily of very thin milk, for a very few months of the year. Given the same diet, sheep or goats produce more milk. Sheep and goats are an absolute necessity. They are kept in rock-walled pens in the villages through the winter, and each family feeds its own few animals a mixture of orchard and poplar leaves with a little straw.

Late in May, the flocks move up to summer pasture at 12,000 to 15,000 feet, with a few men and boys from each community to herd. The herders gather the flocks into stone-walled corrals every night, where they milk both sheep and goats, and churn butter. They consume all the buttermilk, cottage cheese, and fresh milk they want, which is excellent for them but does not improve the vitamin- and mineral-deficient diet of

the majority of villagers. The herders milk into gourds (never washed) and strain the milk by pouring it through a leafy juniper branch. They shake this gourd for a short time, until the butter forms. They mold the butter into ten- and twenty-pound pats, which they wrap loosely in birch bark and then bury in sheep dung, to protect it from rats until someone packs it down to the village.

Each family owns so few animals that they can butcher but one or two a year, which they do at Tumushuling time in December. As one sheep lasts a family about a week, this means that the average Hunza gets meat for one or two weeks per year. Since visitors always come in the summertime, this also explains the ridiculous tale that Hunzas are vegetarians by preference. One of the stories is true—they certainly eat the *whole* sheep! Brains, lungs, heart, tripe, everything but hide, wind-pipe, and genitalia! They clean a bone to a polish that would put a western dog to shame, and in conclusion they always crack the bones and suck the marrow. As their diet is deficient in oils and vitamin D, all Hunzas have soft teeth, and fully half of them have the barrel chests and rheumatic knees of sub-clinical rickets. "Happy, healthy Hunza, where everyone has just enough"!

But more important than wool, meat, or milk is the manure the flocks produce. Without it, the grain would die in a single year and the orchards would not yield fruit. It accumulates nightly within the corrals in the summer pastures, and the shepherds dig out lumps of it which they dry on the roofs of their little huts. They take loads of manure and butter on their backs whenever they go down-canyon to their villages, and bring back flour, salt, and tea for their sheep camps. The winter accumulations in the village corrals are always mixed with leaves and straw, because the people haven't learned to build mangers and the sheep tread some of their fodder in with their manure. This is the basis for the tale that the Hunzas make compost. When I asked them about it, all of them laughed heartily at the idea of wasting good leaves by deliberately mixing with manure.

The serious part of this whole matter is that there is no winter pasture; the high summer pastures are seriously overgrazed; and the amount of manure produced at present is not adequate. Also, the climate is rapidly growing drier and warmer, so the summer pastures will deteriorate with increasing rapidity. The heads of the mountain valleys are bowl-shaped, with the bottom of the bowls at about 12,000 feet. The most extensive pastures are, of course, in these bottoms, and they are the pastures already most seriously damaged. Within twenty years, the best

climatic conditions for pasture will be at 13,000 and 14,000 feet, but here the rock walls are almost vertical and grass cannot grow.

Even though there is a steady drift of Hunza farmers to the higher valleys of the Wakhi country north of Ghulmit, the population of the main oasis is steadily increasing. The lower oases of Khizerabad, Hasanabad, and Hini are drying up, and the upper country cannot support a large population. With pasture land deteriorating and water supply decreasing, Hunza is headed for grim days.

Our garden was a very real success, in spite of my mistake in planting. The boys willingly tried the new vegetables. They loved radishes and beets, and warmly approved of Brussels sprouts, green beans, and turnips. Spinach was not too popular, and only Hayat appreciated parsley. I gave small packets of seed to Beg, Hayat, Suleiman, and Burhan, who turned them over to their fathers; by midsummer new American vegetables were flourishing in several Hunza gardens.

CHAPTER XVIII

We Find Marble and Acquire a New Assistant

CLARK?" the P.A.'s British accent rattled over the phone. "Mr. Mueen-ud-Din and several other officials will be at Gilgit on April eleventh, and would especially like a conference with you. Can you be here?" I agreed with a sigh; Baltit in the springtime was beautiful and peaceful, and now I must leave it to deal with officialdom again.

Suleiman Khan would be my assistant for the first part of this trip. He and I left Baltit on the morning of April third. The Mir wanted me to study the water supply of Hini oasis. This would give me time to do so and still arrive at Gilgit by the eleventh.

We reached the edge of Hini oasis by mid-afternoon. Although I had passed through Hini on every trip to Gilgit, I had never before stopped here because Maiun was a more convenient day's ride. I looked about with new interest. The oasis stretched broad and flat, a mile back from the river to the foot of the barren, dark mountains. Even now in the springtime, barley fields alternated with bare, sandy patches and the scattered, small orchards had not put forth the lush green of Baltit. Here was plain evidence of water shortage.

Suleiman and I moved into the Mir's Hini bungalow, he to unpack and cook, I to minister to a horde of medical patients.

The next morning we climbed the steep canyon to the northwest, which supplied water for half the community. A short distance up, we came to a massive cliff. I chipped a piece off, stared, then clambered up the face, chipping flakes every few feet to make sure. There could be no doubt—here was fine-grained magnesian marble, as beautiful as the best Carrara! Some was pure white, some cream-colored, some had a delicate spider web of blue-gray veins. Rapidly I estimated volume in sight—fifty million tons, and certainly at least that much more buried under the slope.

With the creek for water power and the garnets six miles away for abrasives, the marble could be worked into the pierced fretwork panels which Mohammedan people so love in their mosques and tombs. The Pakistan Government already had a jeep road almost to Chalt, twenty-one miles away. Within a year we could have light motor transport for

our carved marble. Here was a real resource for Hunza! I resolved to encourage the Mir to build a small factory, with water-powered lathes and laps, to make panels for export. My Foundation could easily develop money to finance so definite and practical a scheme. Our financing would give us a controlling interest; I could then manage the factory until some of my crafts school boys were trained, and all Hunza would benefit. As long as the Mir got his profit, it would be possible to set up a really fair wage-and-employment policy, and thus establish a proper precedent for Hunza industries.

We worked on up to the snow line, only nine thousand feet this early in the spring, in order to study the watershed. There could be no doubt: the west drainage was being completely utilized already, and not a gallon more could possibly be derived from it.

Next morning the bungalow chowkidar, Qadir Shah, a nice, happy-go-lucky little fellow, guided us up the mountains east of town. He showed us a few small pockets of quartz crystals, and some garnets on a cliff top two miles further, then we started back. Suleiman dared me to race down a steep, boulder-strewn slope, whereupon Qadir Shah started to dance, barefoot, rushing full speed down the hill. So I sang "Ciribiribin," and waltzed down alongside him, the two of us leaping over big boulders and sliding on the small ones, fifteen hundred feet down a thirty-degree slope. At the bottom he grinned at me, and panted,

"You're a real Hunza! Come on and have tea at my house!"

So we did, salted tea and chapatis. We then climbed a very bad trail, indeed, over a cliff and back down into the canyon northeast of town, to visit the hot spring that supplies the east half of Hini oasis with water. The spring emerges along a strike fault at the base of a marble cliff, and there are signs that it has sealed itself and broken out again many times.

Qadir Shah told us that a djinn formerly held this spring imprisoned in his icy teeth. A holy man came that way, and carved sacred writings on a stone bowl. He then hurled the bowl at the djinn and knocked out his teeth, whereat the djinn fled and the spring gushed forth. Part of the bowl is very carefully kept in a niche beside the spring. Qadir Shah brought it out, kissed it and touched his forehead to it, and handed it to me. I bowed and murmured "Bismillah!" as I took it, in order to show proper respect. It was crudely carved of marble three-fourths of an inch thick, with inch-high Arabic lettering incised on both sides. The bowl must have weighed several pounds; I did not blame the djinn for fleeing.

The people of Hini climb up here every year before planting time and sacrifice a sheep to the spring in order to insure an adequate flow. There were indications that the flow has fluctuated enormously in the past, and that there has been a gradual decrease in the yearly output.

"Tell me," I asked Qadir Shah, "are your prayers and sacrifices always answered?"

"Oh no," he replied cheerfully, "sometimes scarcely any water comes."

"Then what do you do?"

"First, we sacrifice another sheep. Then we try to find who in the village has done something displeasing to God, so we can punish him properly and God will let the water come again!"

I wonder how many small peccadillos have received unreasonable punishment in response to the vagaries of ground water. Neither sacrifice nor science could increase the flow of this spring. Hini's water supply was slowly drying up, and the community of over four hundred families must emigrate and vanish with it.

Sherin Beg caught up with us at Maiun. He had grown tired of school, as he did of everything else he tried, and decided to be my field assistant again. I did not force him to return to school because I believe that a boy of sixteen who has no continuity of purpose can learn only by making his own mistakes. Those who can profit by further education are willing to undergo its discipline.

At Gilgit, I gave Suleiman five rupees for a present and sent him off to visit his family. Then I hurried up the hill to see the P.A. He smilingly told me that Mueen-ud-Din's trip had been postponed for a week or two, but that I must be sure to meet him when he did arrive. To return to Baltit would be a waste of time—the round trip took six days. I decided, therefore, to finish as many as possible of my geologic jobs around Gilgit while I waited.

On the nineteenth of April, the P.A. informed me that Mueen-ud-Din would visit Gilgit on the twenty-seventh. Beg and I left next morning for the native state of Ishkoman, to investigate reports of gold there. Ishkoman lay three days' ride northwest from Gilgit; we could just make the round trip if we hurried.

As we passed through the small villages in Punial and Ishkoman, I noted little groups of excited, angry men at every corner. There was trouble, they told me, between the local population, who were members of the Ismailia sect (like the Hunzas), and their rajahs, who were Sunni. The people had asked the Pakistan Government to depose the rajahs and

to govern them directly. I had heard rumors of all this, but the defiant farmers and the frightened village chiefs in every little settlement brought the reality home. This was a dangerous situation; if it spread, the whole Agency could flare up. Within a month I was to see more of this.

By the time we reached Ishkoman, Beg had grown weary of traveling and lonely for his companions in Hunza. I determined in one day that there was no placer gold in Ishkoman, and paid a courtesy call on the Rajah. (I learned later that he believed I was carrying secret messages between Hunza and his rebellious Ismailia subjects, probably the most fantastic of all the misinterpretations of my motives.) We rode back again to Gilgit.

Mueen-ud-Din, I learned, would be coming within a few days! I instructed Beg to return to Hunza, take charge of the garden, and go to school. He had done a good job, but he was obviously not cut out for geologic field work. A few days of relative isolation in the mountains made him lonely and despondent. He must, therefore, undertake such work and opportunities as offered themselves at headquarters in Baltit. Beg accepted this decision willingly. He told me that his older brother, Mirza, was at present clerking in a Turkestani shop in Gilgit. Would I consider Mirza for a job as my permanent field assistant? I agreed to an interview, because I had learned by now that I must have a dependable assistant, no matter how much this added to expenses.

Beg's brother Mirza arrived next morning, inarticulate with shyness, and murmured that he'd like to work for me. He was about twenty, tall and thin, with the graceful, loose-jointed gait of a born climber. He was a good cook, could write enough Urdu to keep accounts for me, and actually enjoyed reading. I hired him, and sent Beg off to Hunza on Akbar.

There was time for a trip up Dunyor Nullah, before Mueen-ud-Din arrived, to sample the copper ore I had found there last autumn and hunt for the magnetite ore which must be there. On reaching our old camping place at Murkui, I carefully checked my previous observations. All the magnetite boulders were in the outwash from the east fork of the nullah, so the iron ore must be somewhere up that drainage. There were absolutely no glacial deposits here; Qadir had been wrong in his elementary geology.

Mirza watched all this with much interest. He bent his dark head intently over the pebbles of black magnetite and black hornblende schist that I showed him. In five minutes he had learned to distinguish between them, and was helping me to follow the trail of magnetite boulders up

the bed of the ravine. Apparently he had intelligence enough to help me at my work as well as at camp chores. His interest and his quiet self-respect told me that here in Beg's older brother I had a field assistant with all of Beg's virtues plus mature intellectual curiosity.

The trail of magnetite boulders led us to the same hillside that bore the copper vein. There, interbedded with green chlorite schists, we found heavy bands of iron ore. Part of the copper mineralization had even penetrated the iron, and the two minerals occurred together.

A work crew from the Pakistan Government's Public Works Department came up the nullah the next day, to blast a channel across the weathered face of the copper vein so I could assay the fresh ore. They took two days to do a one-day job, using inefficient British drilling methods and old-fashioned, slow blasting powder, but eventually they finished and I could see the ore.

It was a great disappointment. This had been the most encouraging prospect in the district, and I had pinned my hopes upon it to prove my usefulness to the Pakistan Government. The fresh cut revealed that it was not a profitable deposit. The zone of secondary enrichment in the copper was only three to ten feet thick. Below that the primary ore ran about 0.05% copper; twenty times this quality was the minimum for a paying mine. Individual narrow bands of the iron ore were very rich, but the whole deposit of iron was too small to justify working.

We returned to Gilgit and took one more quick trip up Jutial Nullah to assay the pyrite vein there. We found that it narrowed very quickly eastward, from six feet where I had found it to a mere three feet, and westward it split into a number of thin, useless veinlets. This also was unprofitable. With considerable discouragement, I turned in my reports on the prospecting to the P.A., and learned that Mueen-ud-Din's trip had been indefinitely postponed.

Mirza and I finally arrived back in Baltit on May fourteenth. The blossoms of early spring had long gone, and the orchards were all in full leaf. Our garden was growing well under Beg's faithful care. Although the other results of the trip had been negative, I had the fine marble deposit to show for my five weeks' work.

CHAPTER XIX

Our School Progresses

SAHIB, I have one bad thing to report." Orange light from the sunset floated level through the bay window of the old audience chamber, throwing Hayat's strong features into sharp relief as he sat on the faded rug giving me a recital of events during my absence.

Four days ago, he told me, Nasar Mohammed's father had called by telephone from Pasu, saying that the boy's mother had just died. Hayat, who received the message, had decided not to tell Nasar his mother was dead but that she was very sick, in order that the blow might be softened.

"I let him take Akbar to ride on the trip, Sahib." Hayat looked at me.

"And did you—" I began.

"Yes, Sahib, I gave him twenty rupees expense money, because I thought you would have done this." His face lightened. "A man from Pasu brought Akbar back yesterday, and he's in good shape. Were the things I did right?"

"If I had been here myself, I could not have done so well. What made you think to ease his trip by saying his mother was sick rather than dead?"

"You forget, Sahib," he answered quietly; "my mother died when I was nine years old, so I know how Nasar Mohammed would feel. I have also lost three brothers and two sisters." Hayat's compassion was born of his own grief.

That night I took a census of my school in order to discover just how many of the students had lost members of their immediate families. The mortality table read:

<i>Name</i>	<i>Dead</i>
Gohor Hayat	mother, 3 brothers, 2 sisters
Sherin Beg	1 brother, 1 sister
Nur-ud-Din	mother, 2 brothers, 2 sisters
Md. Hamid	mother, 1 sister

<i>Name</i>	<i>Dead</i>
Burhan Shah	1 brother, 1 sister
Nasar Md.	mother, 2 brothers, 1 sister
Mullah Madut	2 brothers
Suleiman	1 brother
Ghulman Rasul	father

These nine boys were all from better than average families; they ate better than average food and lived in clean houses. Those who have written of the "Healthy Hunzas" and the advantages of "organic gardening" have propagated a myth without bothering to learn the true situation. Hayat gave a swift, brutal summary of life in Hunza: "Those of us who live are strong. Those who are not strong die."

My first day at home I accomplished nothing. Continuous traveling, dysentery, and heart attacks had tired me more than I realized; it was good to rest for a whole day, relaxing in the warm May sunshine on the castle roof. The boys proudly brought their latest carpentry up to the roof to show me. Each boy had made a tray of golden mulberry, decorated with a star and crescent at the ends and a scroll in the middle bearing the legend "MADE BY—" with the boy's initials. The neat punch-pattern on the glossy yellow wood resembled hammered brass. I praised each in turn, pleased to see that—now that the boys had learned to do accurate work—Mano was introducing the idea of decoration.

The old castle chowkidar sat down beside me that afternoon, his rascally face lit with an evil smile. "Well, Sahib," he leered, "there's one patient you won't have to worry about. Have you heard about the silly woman in Aliabad who jumped off a cliff this morning?"

He explained with relish that the woman had been quarreling with her mother-in-law and finally, in a fit of rage, ran to a nearby cliff and jumped over. As the cliff was three hundred feet high, she had died instantly.

I had heard stories of such incidents, but this was the first actual case in my experience. Women in Hunza commit suicide oftener than men. Sometimes they jump off a cliff, or in less desperate straits they eat fifty bitter apricot seeds. These contain a lethal dose of prussic acid, but it is absorbed so slowly that death does not come for several hours. If an emetic is given during that time their lives can be saved. There are not the frequent wife-beatings in Hunza that one sees in China, nor is there much infidelity. The women are expected to do the housework, weed the fields, and help with harvest; a fair division of labor, as their

small, barren houses require little attention. The man ploughs, plants, irrigates, harvests, climbs the mountains in search of firewood, and tends the flocks.

Hunza women do not suffer from overwork, brutality, or roving husbands, but they are regarded as intellectually inferior. A proper man never speaks to a woman outside his own family, and even within the family the men visit with other men and the women with each other. Women are uneducated; because they never accompany their men on trips even as far as Gilgit, and are only rarely told anything about the world outside, they have nothing except gossip on which to feed their minds. The infinite boredom of a life from which graciousness and satisfying human contacts are barred, and in which sex means procreation without any connotations of love, is probably the underlying cause of most of the suicides. A particular quarrel or an emergency is all that is needed to release their latent unhappiness.

The average women can look forward to three to five children who live to grow up, and one or two who do not. The legend of "birth control in Hunza" arises from the habit of nursing each baby for about eighteen months, during which time intercourse is forbidden. This helps to keep down the infant mortality by insuring clean food for a long time, but obviously it does not prevent a normally fertile couple from producing six to nine children. The population is increasing at a terrifying pace; Hunzas are emigrating to all the neighboring states and still the overcrowding grows worse every year.

The next morning I returned to my usual routine. I rose at 5:00, shaved, and spent the half hour from 5:30 to 6:00 reading my Shakespeare. The historical plays were a continuous revelation: I found in them the key to so many relationships between the Mir and his people. Likewise, life in this primitive society illuminated passages in the plays which I had not grasped before. For me, Shakespeare had become contemporary literature.

From 6:00 to 6:30 I taught Hayat anatomy and medicine, had breakfast, then treated patients (there were always from twenty-five to sixty) until 12:00. With time out for a hasty lunch, I worked on my records and reports (this was free time for whatever most needed doing—reports, gardening, and overhauling equipment). I helped Mano in the woodcarving school from 3:30 to 7:00, then ate supper, read a little, and went to bed. The days were never long enough for the prospecting

trips, the experiments in the garden, and the educational work I wanted to do.

Just three days later, this peaceful routine was interrupted by a hurried summons to tea with the Mir.

A servant ushered me into the palace sitting room as usual. The Mir and Ayash both rose when I entered, with smiles and outstretched hands, but I could sense a tension that had never been there before. We sat down, tea was poured, and we ran through conversational trivialities in a haste that alarmed me. Then the Mir turned to me abruptly.

"John," he said nervously, his full face very serious, "I know you would not do anything to make trouble in my country, but word has come which disturbs me."

"What word, Mir Sahib?" Now I was disturbed, too.

"It has been said that you are teaching the boys in your school disrespect for me. It is said that the reason you took those two to Lahore last summer and put them up in the best hotels was to teach them that they are just as good as I am!"

"Did people in Gilgit tell you this?" I asked.

"Yes," he answered, "but this time I am worried, John. You may not understand what you are teaching those boys."

"Mir Sahib," I asked him, "have I ever caused trouble for you or your country? Have any of my boys ever shown you the slightest disrespect? Have I ever done anything secretly, behind your back?"

"No, John, but—" the Mir was very uncomfortable.

"Of course you would do nothing to teach the boys disrespect!" Ayash Khan purred. "Beside, if either of them should ever make trouble, we could have them exiled or jailed in Gilgit."

"I know that!" I told him indignantly. "But you've always treated me as a friend. I like you and your people. What would I gain by trouble? And, Mir Sahib"—turning to him again—"who makes more trouble for a king, the happy man who is earning a good living, or the miserable man whose family is hungry?"

"The miserable one, of course, John," he answered unwillingly.

"Then these boys, who are learning a useful trade, are the very ones whom you can trust most!"

"Yes, John," he replied, "I want them to learn carpentry and wood-carving, so they can make furniture for me when I need it." (Without pay, as usual? The question flashed through my mind.) "But there is no use their being taught to supervise things, and to keep accounts. My people are like my children. I will always manage their affairs for them."

Any reply to this would only have stirred him further, so I made no comment. He changed the subject, and we finished our tea on a note of friendly impersonality.

So one of the rumors against me had scored at last! In Hunza, the tales that I was a fifth columnist, a Communist, a gold thief, a man of bad morals, and all the rest had been completely discredited and I now enjoyed the confidence of the people. Having failed to turn the populace against me, someone—and I knew who it was—had started a new line of attack and already had achieved a partial success. The Mir was a deeply suspicious man, terribly sensitive to any challenge to his authority. Doubts had been raised which, I knew, would be augmented every time he met my boys. The boys would always observe the forms of obeisance, but their new feeling of self-respect made impossible the heartfelt servility the Mir desired.

What were the Mir's real attitudes, anyway? He said he wanted medical treatment for his people, and he heartily approved of the dispensary, but every effort I had made to teach public health had been quietly blocked. When his local chiefs stole the medicine I left with them for their villagers, they went unpunished. He had agreed to the craft school, but now it appeared that all he wanted was carpenters to work for him at his convenience. He constantly asked me for gifts of expensive medicines, seeds, all sorts of tools and equipment that I could not easily spare. His contribution to the project had consisted of part of the old castle, a room at Gilgit, and a small garden plot. He spoke beautiful English, he used all the Western shibboleths, "democracy," "freedom," and the rest, but could it be that at heart he clung to the same autocratic ideas and paternalism that had motivated his forebears?

That night I lay awake reasoning through the whole situation and planning my next moves. The Mir suspected my actions, not my motives; if he could be shown that my actions brought him profit and that neither the school nor the boys were a threat to his authority, this crisis would pass. How best could that be accomplished?

First of all, helping Hunza State would not reassure him. Literally, there was no Hunza State. These people paid a tribute to the Mir's personal treasury, not a tax to the Hunza Government. Ditches, trails, buildings, all public works, were done by the people without pay, when the Mir commanded. The Agha Khan and the Pakistan Government supported what schools there were. I ran the dispensary. The Mir must see a personal benefit, not merely an increase in his people's welfare such as my craft school would bring.

Then I remembered the marble at Hini. This could be a solution to everything! I had planned to develop the marble and the woodcarving as parallel industries, capitalized at first by my Foundation and later run as self-supporting enterprises by Hunza people for Hunza's benefit. This would now be impossible—Hunza young men could never assume authority and run all the profitable industries, with the Mir simply deriving a tax revenue—he would never approve it. A far wiser scheme would be to turn over the marble industry completely to him—let him finance, build, and run it, and derive the considerable profits. Woodcarving, which would be less lucrative but would support more people, was after all a village and cottage craft, and the Mir should not feel that its management challenged his authority.

I called on him the next morning, before his daily *darbar* convened, to present the plan. Ayub, the seneschal, ushered me into the office on the second story of the palace. The Mir was seated in a comfortable morris chair with Ayash resting his bulk precariously on a small wooden camp chair beside him.

"Mir Sahib," I told him when formalities were over, "I haven't yet reported to you on my trip. I have at last found a real resource for you, at Hini."

He and Ayash leaned forward, all attention.

"The marble there," I continued, "is equal to the finest in the world, and you have fifty million tons! You could use water power to cut it, and the Murtzabad garnets for abrasives. West Hini nullah would give you enough power to cut the marble into slabs, and you could set up a factory either at Maiun or in Shispar Nullah to do the final cutting and polishing."

"How much would it cost?" Ayash shot at me suspiciously.

"How much is it worth—how much would I make?" The Mir broke in.

"It would cost about twenty-five hundred rupees," I said. "If you approve, I could select the machinery for you, act as purchasing agent, install the machines, and teach your people to operate them. Altogether, a small factory would cost you about a third as much as your jeep.

"And your profits"—I turned to the Mir—"would run at least fifty rupees per ton quarried, or several thousand rupees per year."

I went on to give them all the details I had worked out—labor costs, transportation costs, types of products, marketing, probable volume of trade. Then, gradually, I led the conversation to the crucial point.

In many large countries, I explained, all mineral industries belonged

to the government, while shopkeeping and village crafts belonged to the people. Never before had the possibility of industries and crafts presented itself to Hunza. If the Mir should decide to organize the marble industry, leaving such small items as weaving and shopkeeping and woodcarving to his people, he would be following the precedent of the large countries. The people would, of course, pay taxes on the profits from their village crafts just as they now paid taxes on their farm produce.

The two faces set to a frosty immobility, and neither of them said a word. Profits from the marble industry and taxes on the woodcarving were not a high enough reward, apparently, to persuade them to give their people freedom in even so small an area as cottage crafts.

Two days later, the Mir called me to his offices for another conference. He had thought the whole thing over, he said, and felt that it would be nice if my Foundation would make him a gift of a marble factory, all set up in Hunza. Even while I gaped at this, I understood—it was probably the usual Asian offer of a bargain. My boys could learn to run their own woodcarving industry in exchange for a present of a marble factory to the Mir. Meanwhile, he continued smoothly to his next plan.

"All these new ideas of yours, John, give the officials at Gilgit excuses to object to your presence here," he said. "If you were in my employ, they could say nothing against you. Simply drop these other projects; move down here to the palace, and tutor my son and give medical attention to my family."

"I cannot do that!" I countered, desperately holding my temper. "My Foundation must spend its money to help the poor people of Hunza. This money is not mine personally—I hold it in trust. I can set up a factory for you, but I can't give it to you. And if the time comes when I cannot run my projects, then I must leave and go home."

We finally compromised. By tacit consent, the marble and the woodcarving were discussed no further; I agreed to tutor Bapu in English for half an hour each morning. This left me with the Mir's unspoken permission to carry on with my projects, but under the cloud of his increased distrust. I had done what I could.

The next morning little Bapu arrived sharp at 8:30, his slim, small form dressed in a brown coat and British trousers of gray tweed. A jaunty green hat completed his costume. Pale gray eyes looked soberly at me from between eyelids darkened blue-black, rimmed with heavily blackened lashes. The Eastern eyes peered from his Western facade in

shocking anomaly. Tall and watchful beside him stood Ayub the seneschal, his regular tutor, and a little behind were two brown-eyed, serious little eight-year-old boys. These were his bondservants—two boys exactly his age, given to him shortly after his first birthday to be his companions for life, whether or not they liked it. A great honor for them, and an old Hunza custom.

Bapu had an English primer, which he was conscientiously memorizing under Ayub's watchful eye. He was letter-perfect as long as I pointed to the words in regular order, but if I shifted about he would still recite them in the order he had learned.

For the next month I tried in every possible way to teach him to understand a little English, but I'm sure he never did. The idea of school was so distinct from all normal experience in Bapu's mind that he couldn't learn by comprehension. I tried teaching him things like "chair," "table," "boy," "leg," "shoe," all of which he would dutifully recite. Then when I would say, "'Shoe' *mane kya hai?*" ("What does 'shoe' mean?") he could only give me a blank, self-conscious stare. He was very intelligent, but completely shackled by memorization at the age of eight.

Everything that could possibly be done to unnerve a little boy was being done to Bapu. He had the only desk in his room at school; the teacher and the other boys sat on the floor. He was never late to school, because it couldn't start until he arrived. When he went to play soccer with the other small boys, a few members of the Hunza State Band followed him, to sound a flourish if he should kick a goal. Wherever he went, at least one adult servant and the two his own age followed, and every adult passerby would bow to him or kiss his hand. No wonder that Bapu was already self-conscious! I could only marvel that the Mir, with a similar upbringing, did not realize the evils of the system.

A few days after I started tutoring Bapu, the Mir told me that he needed Mano and my schoolboys for some work on his palace. He assured me that they would learn much. Naturally, I let them go. It developed that he wanted Mano for some extra cabinetmaking, and had the boys set to sawing logs into planks. This was probably his way of indicating delicately to them and to me that he still had complete control over us; and at the same time it would get some extra labor done free. After three days I politely explained to him that I needed the boys to help me, and started teaching them woodcarving myself. In a few days Mano very happily returned. It was difficult to keep one's sense

of humor, but things were in a precarious state and I had to avoid trouble at all costs.

As the days passed, I was forced to realize that the boys remained individualists; they never developed any close friendships or real teamwork. On the other hand, they were showing signs of strong group loyalty. One afternoon, to their great excitement, the Agha Khan's Middle School challenged us to a game of soccer. My boys asked for a day's delay, which gave Rachmet Ali, our most mature player, time to return from Sarat, where he had been buying potatoes. Meanwhile, the boys sewed up the fronts of their underwear shorts, in order to make them do duty as modest athletic shorts. Then they asked me to give them "strength medicine," so I gave each one a Pantabeeroid (vitamin B and a little thyroid), realizing as I did so that five months of good food would thereby lose deserved credit.

A Baltit priest had made two charms for our rivals, verses from the Quran written on slips of paper which were wrapped in cloth and buried at the goals. These would ensure that the ball would go through only when booted by the proper toes. I had one can of pork sausage, sent as a Christmas gift by a friend with a misguided sense of humor, and my team agreed that this was just the thing for a counter-charm. Wherefore they all went forth with small portions of forbidden pig meat wrapped in paper and tucked into their clothes.

The Middle School boys were noticeably smaller and weaker, but they had practiced every afternoon while mine did their woodcarving; this advantage was at once apparent. Their schoolmaster, Samar Khan, refereed. We made one goal in the first half, but he disallowed it on grounds that the ball went higher than the head of the shortest middle-school boy. The opposition made one goal in the second half, and the game ended 1-0 in their favor. Then what howls arose from my Hunza Handcraft School! It seems that they usually played until one side made three goals, and the two teams had arranged a bet on that basis. My boys had decided to play conservatively the first hour, and speed up as the others tired. Hearing of this, Samar Khan had substituted a time limit without telling either team. After a long, heated argument, my boys accepted his decision, as they had agreed to his refereeing in the first place, and returned home. Back at the castle we held an angry council of war, and decided that the proper thing would be to accept today's defeat, practice early every morning for two weeks, arrange a return

match under the other fellows' rules but with a different referee, and whip them beyond question.

It was fortunate that religious feeling had died a quiet and unnoticed death, so dawn prayers did not conflict with dawn practice. I never advised or interfered in religious matters, but I was glad when they stopped observing a custom which had no more significance to them than the pork-sausage charms. Their real convictions were very deep and honorable.

After only four mornings' practice, my excited crew insisted on a rematch; they still had no notion of teamwork, thinking only of following the ball and kicking it goalward. Samar Khan refereed again because no one else was qualified, but this time, following a stern warning from me, he acted fairly. Our team was clearly outplayed; the score was 2-1 when the ball punctured on an overhanging branch, just three minutes before the end of the game.

CHAPTER XX

Our Project Suffers Unexpected Blows

LESS than two weeks after my return to Hunza, the P.A. telephoned from Gilgit again. Mr. Mueen-ud-Din would arrive on May twenty-sixth, he said, and would I please come down for a conference with him? There was no help for it. I must go to Gilgit again, so I agreed briskly, and told Mirza to prepare for the trip. Now at last I would learn the response to my reports on gold, mineral assays, public health, and agriculture. I could also protest about the continuous rumors that I was a gold thief, a jewel thief, a Communist, and goodness knows what else, and could discover what my status would be for the next few months.

Mirza and I left the next morning. He had our equipment in perfect order and our horses in fine condition. We moved as a fast reconnaissance team should. By noon on the third day I was seated on the P.A.'s lawn visiting with two very keen young Pakistani engineers from the Central Engineering Authority in Karachi. Mueen-ud-Din, they said, was in Chilas for the day. While I awaited him, wouldn't I please tell them what I knew of the area's resources? We talked most of the afternoon. It was a pleasure to sit there and work with these men, eagerly planning how they would use the region's tremendous waterpower to build its economy.

Mueen-ud-Din returned that evening. He suggested that I come with his party the next day to Singal village in Punial State, forty miles to the west. We could have our conference as we traveled, and I could demonstrate the geology (in which he had a mountain-climber's interest) along the way. He was going to Punial to arbitrate between the Rajah and his people. As he spoke, I remembered the little groups of angry men I had seen. The people had originally objected to paying a heavy extra tax as a marriage gift to the Rajah's son, but this simple dispute was now lost in a welter of intrigue and religious disturbance. The Rajah unfortunately was a Sunni Mohammedan, while the great majority of his people were Ismailias, followers of the Agha Khan under the district leadership of the Mir of Hunza. No international or Communist issues existed; it was entirely a local affair, but the whole Gilgit Agency

had been split along sectarian lines by the dispute. Mueen-ud-Din was going to conduct a durbar, open to all, in an attempt to arbitrate.

Next morning Mueen-ud-Din, the P.A., and I climbed into the leading jeep of a long official caravan for the twenty-three-mile ride to the road-head. As we maneuvered slowly up the bouldery track, I explained a little hotly that I was tired of continuous rumors which had, I felt sure, been reported to the Pakistan Government. The P.A. maintained a pregnant silence as he drove. I said I wanted a chance to be fairly accused and tried, in order to kill those stories. Mr. Mueen-ud-Din replied soothingly that if ever an accusation seemed to have a grain of justification, he would personally see that I had an opportunity to defend myself, but that meantime any formal action would lose dignity for all of us. Then he turned to me with a smile.

"There is a favor you could do for me, Dr. Clark," he said as we clung to our seats in the bumpy jeep. "If you could send me frequent reports on conditions—the state of agriculture, or any ideas you may have on development—I'd appreciate it." He added that I had a fresh viewpoint, and knew the Agency so well that my reports might be very helpful.

I thanked him and promised to do so. This could mean that last November's threat of expulsion was over, and I was working with official approval. I rode on feeling much relieved. As we crossed a dry gully I explained that, due to the warm, snowless winter, farmers all over the Agency were worried about a shortage of irrigation water this summer.

"Nonsense!" snorted the P.A. "No water shortage anywhere in the district!"

Ten minutes later we reached a small settlement. Mueen-ud-Din called a halt. "Tell me," he asked the group of dusty men who gathered around us, "how are your farms this year?"

"Oh, Hazoor, your kind interest is much appreciated," one replied, "our farms are good now, but there was no snow last winter and we fear that there will be little water this summer!"

"Hm-m-m!" said Mueen-ud-Din, and we drove on.

A mounted detachment of Northern Scouts, a bevy of servants, thirty loaded pack horses, and a collection of saddle horses thronged the hillside at the end of the jeep-road, awaiting us. After some confusion, we all mounted and started off.

We reached Singal at 2:00. Every lane, every orchard, was swarming with people, and the usual inquisitive small boys perched quietly in

trees. As we rode toward the dak-bungalow gate, a line of thirty lean men in ragged gray clothes raised matchlock muskets and fired a salute for us—probably the last time in history that a salute will be fired from such arms.

After a leisurely lunch, Mueen-ud-Din led the Pakistan officials out to their places on the lawn for a durbar. Since this was obviously none of my business, I remained in the bungalow. The durbar lasted more than two hours. Several of the junior officials told me about it when they all re-entered the bungalow for tea. Mueen-ud-Din had listened to the Rajah and his sons, then to every one of the village leaders who wished to speak. He offered to place the area under the Pakistan Government's legal and tax system. The Rajah would remain, but would have power only to enforce laws, not to make them, and the people would have the right of appeal to Gilgit at all times. This solution was eminently fair and wise, but the local leaders would have none of it. When he asked them why, they could give no reasons except to repeat that they wanted the Rajah deposed. He therefore stuck to his decision rather than capitulate to them. They countered by saying that since he wouldn't grant what they wanted, they refused to go home that night. He replied that Singal wasn't his property—they could sleep where they chose—and ended the durbar. The whole thing was too peaceful and much too stilted to be spontaneous. I felt, and I am sure the officials felt, that it had all been planned in advance.

That night the officials slept in the bungalow and in tents, and the Punialis slept all over the lawn. The two groups ignored each other completely, while Colonel Effendi's cavalry kept a sharp lookout for trouble.

As we rode back to Gilgit I realized that here again was an affair that could indirectly have serious repercussions on my project. Mueen-ud-Din knew, of course, that I had nothing to do with it, or he wouldn't have invited me to accompany him. However, as leader of the Ismailias, the Mir of Hunza was inevitably concerned. My presence in Hunza and the work I did there must naturally strengthen his prestige in the area—might not this be politically undesirable?

Then I tried looking at the whole situation from the Pakistan Prime Minister's point of view.

The Communists now held the northern frontier; already they had taken over the thirty miles of Hunza east of Shimshal Pass. To the southwest, the Afghans were stirring up trouble about "Pakhtoonistan." The Hindus held the Vale of Kashmir, to the southeast. Now a local sectarian

group had openly flouted Pakistan Governmental authority, and more internal trouble could be expected. Why leave a foreigner in such a district, especially if his presence might aid the head of the dissident sect?

No one, certainly, could blame them if they should order me out. I returned to Gilgit and thence to Hunza deeply perturbed. Operational matters I could always handle, but political affairs were none of my business. I could not and must not meddle in them, even though in the end they might make it necessary for me to leave.

Mirza and I reached Baltit on the evening of June first; the pressure of immediate work to be done soon drove my major worries to the back of my mind. A rock wall had collapsed on a pregnant young housewife of Altit . . . young Bapu arrived for his daily English lesson . . . a girl in Baltit lay dying of pneumonia and dysentery . . . how much grain did we need for the horses? . . . "Sahib, what is an inch, anyway?" . . . forty-two children had "Dandushing" (an itchy spot on the face, caused by vitamin C deficiency) . . . and so on. The boys were all making folding chairs, and I wanted, of course, to help Mano supervise their work. In a few days the rush of medical cases subsided, and I was able to return to my usual routine.

I had just recovered from an attack of gripe when Colonel Effendi, commander of the Pakistan armed forces for the Gilgit Agency, arrived in Hunza with two young captains, a cavalry squad, and a baggage train. He was on his way to inspect the Misgar border post near Hunza's Chinese frontier. I had met him on a very friendly basis in Gilgit, and respected him thoroughly. He was the grandson of a deposed Amir of Afghanistan—Asia is littered with deposed Afghan royal families—and a patrician to his fingertips. Unlike many scions of Asian "fine old families," he liked hard work and scorned polite evasiveness. Unfortunately, I knew, he was also trigger-tempered, and in the habit of forming snap judgments.

Before dinner at the palace, the Mir and the Colonel chatted together, renewing a boyhood friendship formed during the year both had attended a school in Kashmir. They made an odd pair—the Mir relaxed, soft-spoken, and devious, and the Colonel slender, tall, rigid in his uniform and hotly impatient of speech.

Next day was rainy; the Colonel impatiently laid over. He and his two captains came to inspect my school that afternoon. They strode up the stairs past the landing without even a glance at the tools and work in progress in the schoolroom. I called the boys onto the roof to meet

them. No sooner had they lined up than the Colonel barked questions at them in a drill sergeant's tone: "Where are your homes?—Why did you come here?" and so on. Their faces set in hot anger; no one had ever treated them like this before. The Colonel, I realized with distress, was not a good envoy for Pakistan. Already the Hunzas resented the way the P.A. and the Agency Surgeon had neglected them; now they would actively dislike this haughty person. Suddenly the Colonel whirled at me.

It was obvious, he said, that I was raising their standards of living too fast. This would make Communists of them. Furthermore, it was ridiculous to suppose that these primitive tribesmen could learn craftsmanship in anything less than thirty years. Although my motives were undoubtedly meritorious, from a military standpoint I was endangering the safety of the frontier—stirring up the local people. My presence so close to the border might incite the Communists to raid Hunza, and he would so report to his Government.

Desperately but uselessly I replied that the Pakistan Government wanted standards of living raised, that these boys had already shown their ability at craftsmanship in the schoolroom he refused to inspect, and that I had never stirred up any local people. But the colonel's decision had been made. I stiffened to cover my dismay. No country could be expected to ignore such a report coming from its own military commander in a sensitive border area. This would certainly damage my project and might even end it.

The fact that it was utterly unjust and untrue could not alter the situation. The colonel had not, of course, bothered to investigate my school, or Hunza's social structure, or what I was trying to do. These ideas, I knew, had been planted in his mind by those who were opposed to me, and had found there a fertile ground. I knew also that, even though the Communists had objected to the presence of an American so close to their frontier, it was ridiculous to suppose that they would open a major war because of my project. Having successfully persuaded Mr. Gurmani and Mueen-ud-Din of the value of my work and placated the Mir's suspicions, I was now under attack by the military authorities. What a tribute to the strength of my basic plan, that its partial fulfillment by one man with inadequate resources should evoke such intense reactions from those who desired only to retain the status quo!

Colonel Effendi insisted that I accompany him north as far as Khaibar. When Mirza and I went to the palace to join him, after a hurried breakfast, I found him with the Mir and Ayash, the three of

them silent and angry. To my surprised question, the Mir snapped back that there had been serious trouble in Punial last night. Word had just reached them by telephone that a detachment of Gilgit Scouts had fired on Punial farmers, and now seven were dead and thirteen wounded. Hastily I suggested that this was only a first report, and that the most honest observers might make mistakes due to excitement. It was obvious that the Mir, in his present mood, must be treated diplomatically. Colonel Effendi promptly told me to keep still, that I was making the situation worse, then he proceeded to say things which visibly angered the Mir further. I feared that his rudeness would goad the Mir into ill-considered action. Finally, after two hours, we managed to prevent an open rupture. (The Pakistan Government restored peace and order in Punial in the course of the next two months, without martial law or further bloodshed.)

Three days later, Mirza and I parted from the Colonel at Khaibar. Since I was in the area anyway, I took advantage of the opportunity to explain to the whole village that I hoped to start a wildflower garden in the canyon above the town, and their own Burhan and Hamid would superintend it for me. The colonel and his party went off to Mintaka Pass where, I later learned, he stirred up the first border incident in over fifty years. I was a full hundred miles away at the time, but the incident added weight to the tale that the whole area was unstable and the presence of a foreigner undesirable.

At last I returned to Baltit and my school. The boys had all finished their folding chairs and were starting on individual projects. Hayat was making a small oval table of yellow mulberry, Nasar Mohammed began a cigarette-and-match dispenser of apricot, Mullah Madut planned a branching candlestick, and the others settled on small tables and boxes. The chairs were neat and workmanlike; it was hard to believe that none of these boys had ever sawed a board until six months ago.

Sherin Beg brought me his folding chair as soon as he completed it. "Sahib," he said, "I want to make this prettier. Couldn't we cut a design in it with a knife? Would you help me?"

I brought out my paper and together we planned a conventional floral design, typically Hunza but laid out geometrically rather than free-hand. Beg very happily incised it on the back and legs of the chair; the decoration greatly improved the over-all effect. The other boys admired it, but none of them tried to emulate Beg's effort on their chairs. Remembering Beg's love of the beautiful birds at the zoo in Lahore, I hoped that at last, here in art, he had found a field to which he could devote himself.

Medical work, short prospecting trips, and the school gobbled up

the remaining days of June. I had decided that the boys should have two months' summer vacation, to coincide with vacation in the regular school system. This would give them a chance to visit their families, to tell their home villages about the American school, and to show the things they had made. No matter what the future might bring, we would adhere to my original plan as long as possible. The last evening, they all busily packed their clothes in small bundles, tied them to their chairs, and fastened the trays on top.

In the first glow of morning they lined up on the castle roof, each with his pack on his shoulders. I stood by the stairwell to bid them good-bye.

"Remember," I said, "be here two months from now, on September first!"

"We'll remember, Sahib! We'll surely be here! *Salaam Alaikum.*"

"*Khoda hafiz!*" Down the stairs they went and out the castle courtyard, their chairs like pack-boards riding on their shoulders. Suleiman started west, toward Gilgit, and Burhan, Hamid, Nur-ud-Din, and Nasar Mohammed turned east, toward the grim, barren peaks of Wakhan.

CHAPTER XXI

We Acquire a Lathe

THE moist, cloudy heat of a Karachi summer day seeped past the heavy blinds into the dim reaches of the spacious office. Mr. Mohammed Ali, the Secretary General of Pakistan, turned his drawn face and piercing dark eyes toward me again, as he had that day, more than a year ago, when I first arrived in Karachi. This time his eyes were kind and very sad.

"Doctor Clark," he said quietly, "we in Karachi understand exactly what you have been accomplishing up there in Hunza. We want you to know that we deeply appreciate it; we realize the difficulties you have faced and we respect your accomplishments."

"Thank you, sir—that knowledge makes my work easier."

"I hoped it would," he replied. "But we are sure you also understand that many circumstances—both internal and otherwise—have arisen to complicate the situation. A government officer must, as I am sure you realize, make a decision based not on his heart, or even on the intrinsic merits of a project, but rather on that project in relation to the whole situation."

"Yes, sir—I fully understand." Was he going to tell me that I couldn't return to Hunza?

"How long were you planning to stay in Hunza?" he asked.

"My funds will run out in November," I answered. "I had hoped to remain until then." (I had planned to go to America, recoup finances, buy equipment, recover my health, and return to Hunza.)

He nodded in confirmation. "We had wondered," he said, "if it might be possible for you to transfer your project to some region not so politically fluid—the Punjab, for example?"

"No, sir," I answered. "My sponsors gave money for Hunza. My whole project is built around Hunza. The Punjab is relatively well-to-do, and I could not urge them to transfer their interest."

"No," he agreed, "I didn't think you could. A dedicated project like this cannot be shifted from place to place. It must live or die where it is."

We shook hands and I left. I knew now that I could finish my stay, but would not be allowed to return. I also knew that necessary policy had dictated this decision. The worst that gossip had accomplished was to influence Colonel Effendi's military report. My project was dying because of the Communist threat, Colonel Effendi's report, and the disturbances in Puniā; the Pakistan Government had shown me every courtesy consistent with its own national safety, and had given me clear and honorable notice of its decisions at all times. It would be my responsibility to translate this policy decision into the gentlest possible reality for my nine schoolboys and for my patients in Hunza. I must try to insure that my boys could go on learning, that Hunza crafts would have a market, that Hunza people would have a doctor, even when I could not be there with them. I must not let myself grow bitter. I must not let my health or my doubts interfere. For the next three months I must work like a young man full of vigor.

With these thoughts, I returned to the hotel to tell Hayat and Beg the news. They had accompanied me on this trip to Lahore and Karachi in order to obtain needed medical treatment and to see more of their new country. Neither of them showed surprise as I spoke—life in Central Asia had given them premature experience with governmental trends. They commented, almost in unison, "What will you do now, Sahib?" Together we had met so many new situations that they hoped we might find a way to conquer this one.

All night I lay awake, evaluating the situation and trying to make plans. I could see but one faint possibility. If I could turn my entire craft school, dispensary and gardens over to some very large organization, eliminating myself, no one in Pakistan would have intrinsic objections to the project. It might be that this one project as part of a nationwide effort would arouse less Communist resentment than it had as a unique, one-man venture. The Ford Foundation Exploratory Committee was due to arrive in Karachi very soon, looking for worth-while projects. They were certainly a big enough group, and they were the only non-sectarian organization available. Giving my project to them was a desperate last hope, not a reasoned program, but certainly there was nothing to lose by trying.

Two days later the Ford Committee arrived, and I met another reverse. This Exploratory Committee was, very properly, gathering information on which to base future policy. The Ford Foundation was not yet in the detailed operational phase of supporting and operating individual projects, and would not be for some time. Since my project could

not possibly run without supervision, and no other organization was capable of taking it over, this first plan must be abandoned.

The only alternative was to try to run things on a reduced scale from America. But to do this I would need trained men. Hayat and Beg should have another year or two before they could possibly function in this capacity. Then the idea came to me that the best place for them to learn all the necessary techniques would be in America. I must arrange to take them back with me. In a year, Hayat could learn how to make carved articles the American stores wanted, and how to pack them for shipment. Beg would be apprenticed to a wholesale seed company, where he would find out how to handle wildflower seeds. Meanwhile, both of them would be absorbing the English language and American philosophy, so that ultimately they could do business directly with American companies. Each of the craft school boys would then start a cottage carving and seed industry in his own village, and Hayat and Beg would function as a central clearing post for tools from America and products for export. If the Pakistan and American governments would let the boys stay and learn for two full years, so much the better. Expenses of the trip would throw me further into debt, but I knew that my Foundation's sponsors would underwrite the whole venture once they learned of the situation.

The Mir of Hunza seemed the only obstacle. He must be made to see the direct advantages to him, or he might block the whole scheme. I would have to approach this carefully and at the proper time, when we returned to Hunza.

The boys were too excited to eat when I told them the plan at breakfast. We began their education in civilized industry at Lahore, on the way back from Karachi. I took them first to a big machine shop, where they saw drill presses, milling machines, and turret lathes. Then we went to a small woodworking shop which made wooden bedsteads called charpoy. The lathes excited them tremendously.

"Why can't we have one like that for our school?" then both faces fell—"Oh, no electricity in Hunza!"

"Wouldn't it work fairly well from a water wheel?" Hayat asked hopefully.

"Silly!" said Sherin Beg, "this thing turns around up-and-down like a jeep wheel, and water wheels turn around lying down!"

"We could use a belt—or somehow find a way! We could build a waterwheel standing on edge if we had to."

A lathe for our school was an excellent idea. I could teach them to

run it, and we could store it pending their return from America. I assured them that we could hitch to a water wheel, and that we'd buy a lathe if we could find one for sale. Meanwhile, they bought a set of char-poy legs apiece to bring home to their families. We spent the rest of the day scouring the Suddar Bazaar for a lathe.

Next day I went to the Mission Hospital. Their technician diagnosed amoebic dysentery (I learned later in America that this was incorrect), and the doctor discovered a pararectal abscess which required immediate operation. Since a proper operation would have laid me up for two weeks, I asked him merely to open it so it would drain, and let me go back to Hunza for my remaining three months.

He refused—this wasn't an outpatient operation; the incision would heal shut and I'd be worse off than before; no ethical surgeon could perform an unsafe operation, etc. All true, but I knew I wasn't going to die and I couldn't waste time now.

I asked him which was safer, to return to Hunza with a drain or without one, and he agreed that it was safer with one. So he gave me a local anesthetic and opened me up, muttering meanwhile, "not an outpatient operation!" He did an excellent job. It did heal shut in Hunza three weeks later, just as he had warned me it would. I tried to reopen the incision with my scalpel, but couldn't. Such an operation is mechanically difficult, but the real reason for failure was cowardice. Every time that knife really hurt I quit cutting. I found that a half day on horseback would bang it open with little discomfort, and from then on the problem was solved.

We took the train to Rawalpindi the next night. I had a short conference with the Ministry for Kashmir Affairs, to suggest that the boys visit America and to let them know that I was returning, then we tried to get a plane back to Gilgit. For six days we were delayed, first by bad weather and then by breakdowns in the Orient Airways' tiny fleet of superannuated C-46's.

Meanwhile, the boys continued their lathe hunt. Finally Hayat came in glowing with excitement.

"Sahib, Sahib," he exclaimed, "I've found a beautiful lathe! It has more gadgets and wheels than any lathe we saw in Lahore. I'll bet it will be cheap, too!"

We went at once to the machine-tool company that he had located. He had found a metal-threading lathe with an electric motor. The salesman detached the motor for us, and sold us the lathe for 640 rupees—about \$190.00. We would have to disconnect the automatic feed, and run

the lathe at a much higher speed than it had been designed for, but it would function and it was big enough to hold anything we would need to turn. It weighed 140 pounds, a very full load for one pack horse, and was a little over three feet long. We would have trouble carrying it from Gilgit to Hunza.

On August twenty-fifth, two full weeks later than I had planned, we finally made the flight to Gilgit. The lathe, winter jackets for my whole school, plus the dishes, wooden bedsteads, cloth, and other things the boys had bought made a tremendous load. We were lucky enough to find three pack horses and a couple of donkeys in town that same afternoon, so we could leave the next morning for Baltit.

Our first problem was how to pack the lathe on a horse. The packmen tied a pair of empty pack baskets on the biggest horse, and roped the lathe crosswise over them. All went well on the first day, as far as Nomal, but the next morning, coming up the deep canyon, the horse developed a big saddle-sore, which steadily weakened him. By the time we reached Chalt, the poor beast was an hour and a half behind the rest of our caravan; it was apparent that he could go no further.

We paid his pack-man off and transferred to another horse, driven by a whining old man and a small boy. They tried roping the lathe directly to the horse, but had to readjust the ropes every few yards. The lathe slid from side to side, almost fell off, and badly galled the horse's back. At Maiun there were no horses, so we hired six men to carry the lathe slung from a heavy pole, like a Chinese sedan chair. At Khanabad, three miles above Maiun, they announced that they would go no further because the weight was too great. I told them that they had agreed to carry it and were responsible, then galloped quickly ahead, because I knew that they would be afraid to abandon anything of so much value. We reached Baltit that evening, but though we watched from the castle roof until dark, the lathe did not arrive.

Late the next afternoon a brawny man showed up, carrying the lathe on his back. The others had quit, but he had brought it the last eighteen miles alone, in hope of extra pay. I paid him twenty-five rupees, and sent three rupees apiece back to the others. Altogether we had spent about forty-six cents a pound to move 140 pounds 270 miles. Next to the Mir's piano, the lathe was the heaviest single object that had ever been brought up the trail. It was worth the cost, though, in publicity value alone. Word spread around the oasis that we had brought a real machine to Hunza, and a steady stream of people climbed the old castle stairs to gaze at it. I noticed that only two of them asked what it was for.

We now had three problems: finding a mill where we could install our lathe; making a power linkage between mill and lathe; and clearing out the greasy cosmoline which had been packed on every shaft and bearing to guard against rust.

We spent most of a day clambering in and out of dusty mills in Ultar Nullah, interviewing unwilling owners. Finally we rented part-time use of a very good mill that turned at 140 r.p.m., considerably faster than most. The mill was a tiny, flat-roofed rock hut, barely high enough to stand upright. Light filtered in from the door, dimmed by the haze of flour-dust which enveloped everything. A big wooden bin, like a pyramid hung upside down, released a steady trickle of wheat into the spinning stone millwheel. The whole building shook gently as the wheel rotated unevenly in its unstable mountings. The roar of water and swish of grinding wheat made speech almost impossible. It was not an ideal place in which to operate a lathe, but it would do.

Once we had our source of power established, Hayat and I started to disassemble the lathe in order to clean it. We had bought a little kerosene from the Mir to wash off the last cosmoline after the bulk of it had been wiped away with a rag. Suddenly Hayat grinned at me.

"Sahib," he said, "will you do me a favor?"

"If I can. What is it?"

"Show me how to take off the first wheel, then you go away and leave me alone with the lathe."

"Why?"

"You taught us that anything that another human brain has made, our brains can understand. I'd like to try this and see if it is true."

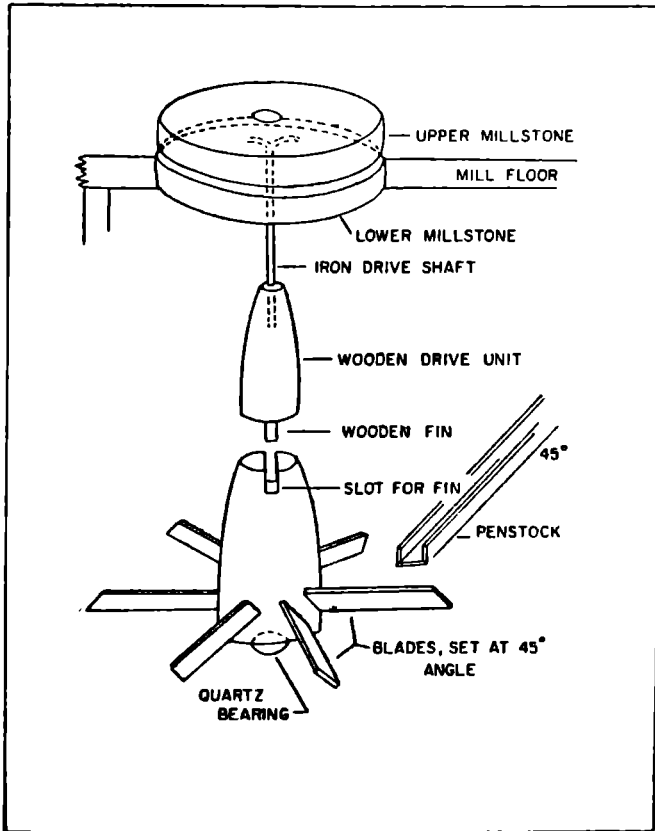
I couldn't risk the lathe by leaving it entirely, but I did withdraw a few steps and let him puzzle out the timing gears alone. To his intense satisfaction, he managed to understand every part. The idea that he would study anything analytically was tremendously encouraging. Most Hunzas regarded a machine as an organic whole, to be accepted without question. But Hayat was even willing to run an objective test of what I had taught him, neither believing nor disbelieving emotionally, and this was best of all. Now he could accept the other important things I had taught him—that he was not less capable than others, that I and other Sahibs were not a special race of brilliant men, that only his own willingness to learn and work would limit him. Come what might in the future, Hayat had learned the fundamental attitudes of the research mind.

Sherin Beg helped with part of the two-day cleaning job, but he was perfectly content to wipe away grease while I disassembled the

machinery. Suleiman tried his hand, but he substituted strength for reason, and almost broke the lathe before I could stop him.

Meanwhile, we also worked on the linkage that would transmit power from the waterwheel to the lathe. Hunza waterwheels are assembled thus :

HUNZA WATERMILL



We planned to replace the upper millwheel with a pulley wheel, then take power from the pulley wheel to the lathe with a seven-foot V-belt we had brought from Lahore. The V-belt would operate on a half-twist, which was bad engineering but couldn't be helped.

A local blacksmith pounded out a soft iron shaft for us. The father of Mullah Madut, our Baltit schoolboy, had a little home-made foot-power lathe, on which he turned out a four-inch wooden pulley wheel for us (this was as big as his lathe would take). With this we were able

to assemble our linkage in the mill and turn a seven-inch pulley wheel, the limit for our lathe. We then discarded the original small wheel and installed the larger one. It gave us a maximum lathe speed of about 600 r.p.m., which was not fast enough for first-class performance on wood. We had trouble blocking the lathe securely in one place, and more difficulty trying to keep the mill pulley shaft from wobbling. Where it passed through the floor, the shaft was held by a bushing of wet leather with shims of wooden slivers; it had to be re-aligned whenever we pulled the mill wheel and installed the pulley wheel.

Normally, a wood lathe turns at over 2,000 r.p.m, and the operator holds the cutting tool in his hand. We found that our lathe was so slow and low-powered that it would stop if we pressed the tool too hard. Moreover, our wobbly pulley shaft set the whole lathe in vibration, making it impossible to keep the tool pressure uniform. We met this difficulty by locking the cutting tools in the regular machine tool carriage.

After four days of continuous labor, we ended with an assembly consisting of gadget heaped upon gadget, but it worked and we could turn both wood and marble with it.

Having solved all mechanical problems, we then met a serious social one—everyone wanted to be chief operator! Hayat regarded it as his own child. Beg reared up in open rebellion: Hayat could do the doctoring, but the lathe was *his*! Suleiman wanted it, and Burhan—they all did! I finally decided that Beg should be in charge, in the hope that the other boys' continued jealousy would keep him interested. Within two weeks he was neglecting to clean and oil the lathe, and within three weeks Hayat had gradually taken charge, although it remained officially Beg's until the end.

About fifty people came into the dusty little mill during the first two weeks to see the lathe work. After that they lost interest. Only a few asked questions. Most of Hunza accepted the machine as they did life, death, Sahibs, and caravans—an interesting but incomprehensible part of fate.

The story of our lathe epitomizes on a small scale most of the difficulties of introducing a new element into an old culture. First comes the problem of transportation. Next, people must learn to accept the new element and use it. Third, all sorts of expedients are needed to gear the new object mechanically into the old system of operations. Finally, the wisdom of Solomon cannot foresee all of the social frictions that will arise from the new machine.

CHAPTER XXII

Unfinished Business Completed

MIRZA and I rode the desert trail toward Khaibar in the crystal air of a September evening. All of our schoolboys except Burhan and Hamid had returned to Baltit and I was coming up this forty-five miles to find them.

My last ride up this trail, I mused, had been a happy one. Three mercurial young Australian geologists had shown up, early in the summer, and I had guided them all over Hunza. I remembered John Ivanac's quick, sensitive water-color sketches, Don King's interest in glaciers, and Doug Traves' worry about the pack horses. Most of all I remembered the cheery friendship they had given me during our two weeks' trip.

Doug Traves had believed that some of the quartz crystals here at Khaibar might be valuable. Since he and I could not spare the time to prospect, we had taught Burhan and Hamid what we wanted. Doug had hired them to prospect for ten days, collecting samples which I would forward to him through the P.A. at Gilgit.* I hadn't much hope for the quartz crystals, but I was as jubilant as my two boys that they had been hired. This would be discussed on the rooftops and in the winding lanes of every village here in the North—those who attended the American school were receiving fine jobs!

Doug had returned to Pasu to meet his colleague, Don King, and start back for Baltit, and I had taken Burhan and Hamid up the nullah again, to plan our flower garden there. We chose a plot near a tiny, abandoned irrigation ditch that could easily be re-opened. The boys were to hire their Khaibar neighbors to repair the ditch, dig the garden, and build a rock wall to protect it. Later, when the boys had finished prospecting, they would transplant wild flowers. With memories of my other garden in Ultar Nullah, I explained very carefully that I wanted the garden arranged in beds, with only one kind of plant in each bed. Now,

* The Australians were part of the Colombo Plan, the British version of Point Four.

two months later, I was returning to find the boys, inspect the garden, and get the samples of quartz crystals.

We reached Khaibar after dark, and pounded on the door of Burhan's home. He tumbled out sleepily and ran to rouse Hamid. The two of them brought us food and horse fodder. While we ate, they told me that none of the messages I had sent them by telephone through the lumbardar of Murkhun had reached them. No wonder they hadn't returned—there were no calendars in Hunza, and all the boys had depended on me to let them know when school resumed. Then they brought me the quartz crystals. As I had feared, the flawless ones were all too small for use, but I packed them away to deliver to the P.A.

In the morning, they proudly led me up the steep, cliff-walled canyon to the wildflower garden. It stood on a little flat, among dark green junipers which sprung from hillsides of creamy-white limestone. A tiny ditch of crystal water trilled and gurgled under the low wall that surrounded the garden. Small, neat beds of plants that were strange to me, some delicate and some thorny brush, had turned the rusty green of early autumn; ripe seed pods were thick over several of the plots.

"My family built these three walls, Sahib," said Hamid, pointing.

"And mine built that wall and did most of the work on the ditch!" Burhan interjected hastily, jealous lest I think that Hamid's clan had done most of the work.

The two boys had done everything I ordered, in the way I wanted it done, so I told them that their work was excellent and I was well pleased. We set to work and gathered all the seeds that were ripe, carefully wrapping the different varieties in separate packets. These, with our harvest from the Ultar garden, would go to the George J. Ball Seed Company in Illinois, in return for the vegetable seeds they had donated to me for Hunza. This part of the project was functioning as planned; the two gardens could be multiplied to forty or fifty if the seeds proved useful.

On the way back down the canyon, Burhan said to me, "Sahib, I've been thinking a lot about jeeps."

"What about 'em?"

"Look—my father's fields are there below us, and our house is way over there, a long walk. Always we have to carry all our wheat and barley that long way home on our backs. We couldn't make a jeep motor, but couldn't we make a donkey-jeep out of wood, and let a donkey pull it?"

Burhan had independently invented the cart! He was a few thou-

sand years late, of course, but no one else in Hunza had even thought of such a thing. Hayat with the lathe, Burhan with the cart, Suleiman at woodcarving, and Mirza at art, had now shown definite signs of creative thinking. This was more important than the achievement of any of my immediate projects, for in the long run Asians, like everyone else, must work out their own salvation. These boys were learning to attack their problems by constructive planning and action. Somehow, I must see that they had their chance to go ahead.

Back in Khaibar, I sat down in the rest-hut doorway, facing the tiny, gray adobe courtyard. "Now bring your families—everyone who did any work on the garden," I ordered. They hurriedly assembled their families in a line facing me, while the rest of the village peered over the wall and through the gate. The two boys squatted beside me and, as each man in turn stepped forward and saluted, they told me how many half-days he had worked. I accepted their statements without question and paid each man accordingly, on a scale of four rupees per day, double the highest they had ever known. Never in its history had Khaibar earned so much money, and never had two boys received so much honor! To be trusted in a financial transaction was unheard of. Here was a convincing demonstration that honor and good pay were the rewards for honest effort.

Burhan and Hamid returned with us to Baltit; all our nine students were now assembled. Mano arrived, and the castle immediately resumed its old routine, with all the boys out to school each morning and cheery banging and sawing filling the afternoons.

But I was not so easily to settle to my work; an agitated note from the Mir awaited my return. I hurried down to the palace and found him and Ayash sitting in his little receiving room.

"John," the Mir said with a worried frown, "the P.A. has been telephoning me. He says he wants to see you about taking Hayat and Beg to America. What is this?"

"Mir Sahib," I apologized, realizing that I was in trouble, "I should have explained to you before, but I've not had a minute to visit with you since I came back from Lahore." There was no time now to present my plan diplomatically. I told him that I would not be able to return to Hunza, and outlined my plan for Hayat and Beg to study in America so they could carry on the project.

"Oh no, I could not approve that!" he exclaimed hastily.

"Why not, Mir Sahib?" I asked.

He appeared to be thinking up a reason. "It wouldn't be good for the boys. They would be dissatisfied when they returned."

"It wouldn't be safe," Ayash broke in. "The Pakistan authorities, the Communists, everyone would distrust them."

"I'm sure Pakistan could be relied upon to treat them fairly," I replied, "and there are no Communists in Hunza."

"Well, John, I just can't give my approval," said the Mir. I could not know his mind, of course, but was this a reflection of his earlier fear that they would become too independent? There was nothing more to be said. A king had made a decision. My whole venture was doomed—the effort and time and money I had spent would produce no permanent benefit.

The following morning to my complete surprise Ayash appeared at the castle, all sweet affability.

"The Mir Sahib has changed his mind," he said. "Just tell us what certificates the American Government wants, and he will sign them." I went back to the palace, puzzled and distrustful. Both of them were smilingly cooperative—too cooperative. The Mir cheerfully made out and signed certificates that both boys had homes to return to, and that neither had ever committed a crime or misdemeanor. All the while they appeared extraordinarily happy over the whole affair. I returned with the certificates, pleased but much puzzled. Why the apparent change of mind?

A few days later the P.A. telephoned that I must report to him in person at Gilgit regarding my plans for the boys. School was running smoothly, with Mano in charge, and much though I wanted to stay and teach every remaining minute, there was no choice. Mirza and I left, late in September, to see him. Autumn had not yet touched the leaves, but the cool air inspired our horses and we made record time.

At the foot of the big hill south of Nomal we turned off the narrow road for a jeep. It swung over beside us and stopped.

"Hello, Clark!" The P.A.'s flashing smile gleamed from under his bristling moustaches. "I have some friends of yours here!"

There in the jeep with him were George and Charlotte Weller, the Americans I had met in Karachi. George was a correspondent for the *Chicago Daily News*; he had won the Pulitzer Prize for his reporting of the Russo-Finnish war. Under his guidance I had written two articles on Asia for his paper. The Wellers were new but good friends of mine—why hadn't the P.A. let me know that they were coming?

"Hi, travelers," said George, his massive blond features an odd contrast to the P.A. "You two look ready for anything!"

I've always been proud of my outfit, so I lapped that up.

"Where are you folks going?" I asked.

"The P.A.'s driving me to Chalt, and I will take a horse there to Baltit. Charlotte returns with the P.A. to Gilgit today. I'll be sorry to miss you at Baltit—hoped to find you home."

From his tone I realized George knew that if the P.A. had phoned, I would have stayed in Baltit to meet him. If the mazes of local politics made it undesirable for George and me to visit together in Baltit, we could do nothing about it. I told George to be sure to inspect the Handcraft School, and he promised that he would. Then the jeep rolled north and Mirza and I went on to Gilgit.

I prepared a detailed report for the P.A., outlining my plan for the boys' trip to America, telling where they would live, with what American companies they would study, and what they would do when they returned to Hunza. The report covered every conceivable detail of their itinerary. As soon as it was finished, Mirza and I left again for Baltit. We met George Weller at Nomal again, this time in front of the dak-bungalow. He was in a military jeep, escorted by a young officer and the P.A.'s personal secretary.

He told me that he wanted to talk to me about my school, breezily informed his escort that they could wait outside, and led me into the bungalow sitting room.

"Hey, fellow," he said, "you've done something real up there! My God, what a place! I liked the way your boys looked me in the eye, and I liked the work they've done."

"Did they show you our lathe?" I asked.

"Yes," he chuckled, "and it's a real Rube Goldberg, but it works. Say"—eyeing me sharply—"you look even worse than you did in Karachi. Are you sure you can last out until November?"

I explained that I had lost twenty pounds due to dysentery and a draining abscess, and was naturally worried about my project, but aside from this there was nothing seriously wrong with my health. We had only half an hour to talk, then he climbed into the jeep and went rolling down the shady Nomal lane toward Gilgit, while Mirza and I rode back to Baltit. His real approval and honest American attitude had bolstered my sagging confidence for the three hard months ahead.

A few days later the P.A. called me by telephone again.

"I have instructions from the Pakistan Government," he said, "to

tell you that you are not to go further toward the Chinese frontier, in the future, than Sarat." This was eight miles beyond Baltit. The border incident and Colonel Effendi were responsible for this order; it reflected the Pakistan Government's real concern for the safety of its frontier. I realized that it would have been easier for them simply to order me out of Hunza, and this was an effort to cooperate. Naturally, I had planned no more trips. Every remaining moment must be devoted to educating the boys, if they were to carry on successfully without me.

CHAPTER XXIII

The Final Quarter

THE autumn sky shone brilliantly over Hunza. The apricot orchards were blooms of orange fire from which the tall poplars thrust their lances of golden light toward the blue above. The bare tan earth of the fields between presaged the coming winter. At my feet, Ultar ditch gurgled softly as the gray water hurried toward a little flour mill.

The Mir had asked me if a small hydroelectric plant, sufficient to light his fine new palace, could be run with power from this ditch. I carefully measured fall and foot-seconds of flow, and computed horsepower. The flow was small, but there could be no doubt; it would light the Mir's palace. I walked down to the palace, climbed the stairs to his office, and told him that he had adequate power.

"Then doubtless," he replied calmly, "your Foundation would kindly give me a hydroelectric plant!"

I explained as tactfully as possible that my Foundation could probably bring in a plant big enough to power our woodworking machinery, light all of Baltit, and also light his palace, but that no Foundation could get funds for a gift of such magnitude to serve his palace only. He changed the subject abruptly. I knew that he considered the idea of people giving money to common farmers but not to their king specious and ridiculous, just as he had before when I had been forced to refuse him a marble factory. Unavoidably I had angered him, at a time when I needed his cooperation.

A few days later, he told me that he had ripe peaches, pears, three large glass jars, sugar, and plenty of pans; would I please teach his cooks how to can fruit? This I could do, and since it was a project close to his heart, I happily agreed. Hayat ran the dispensary next morning, while I went to try my hand at it. Fortunately I had brought with me a paper book on canning and preserving. I had never canned anything before, so I spent my reading period (6:00-6:30 A.M.) that morning doing preliminary homework. The smallest jar broke while it was boiling, but by mid-afternoon the two large ones—each over a

gallon—were filled with attractive fruit and sealed with candle wax. The Mir was well pleased; the canning restored to me some of the favor the hydroelectric plant had lost.

I returned hastily to the woodcarving school. The boys were all busily at work on boxes, candlesticks, and men's pipes. I had explained to them that school would close in November, when I must return to America. We hadn't yet discussed the plan for starting a handcraft factory when Hayat and Beg returned. It seemed better to wait until I received official approval before raising their hopes.

By this time my project had been under attack from so many sources that I felt like a dazed boxer—sure that more blows were coming, but unable to anticipate them. The next two were not severe, but they struck Hayat rather than me.

One day while I was writing letters indoors and he was working on a mulberry table on the castle roof, I heard footsteps come upstairs.

"Here," said a gruff voice, "I've brought ten seer of butter for the school—that's forty pau, so it will be fifty rupees."

"Butter is one rupee per pau, as it has always been," said Hayat.

"What's the matter with you? I'm your uncle, a man of your family! Of course the price of my butter is one and a quarter rupees per pau!"

"No!"

"What is this foreigner to you? How dare you treat me this way?"

"Uncle, I sit at the Sahib's table and I wear the Sahib's clothes. He trusts me with his money and all he owns. While he does this, I will not betray him. We pay one rupee per pau for butter here; if that is not enough for you, sell your butter somewhere else!"

Hayat got the butter, of course, but he also earned the deep dislike of his own clan. His action was as shocking to them as his agreeing to such a proposal would have been to me. Hayat had risked the loss of his security and his patrimony for the sake of an ideal of honesty and justice that was alien to him. New ideas were bound to be opposed, in Hunza as everywhere else. Hayat, who adopted the new way, would be disliked more than the foreigner who taught him.

Definitely I had not won all of Hunza. The boys were naturally inspired by the idea that they were competent to learn and to do anything others could do. The adult community was grateful for the dispensary and enjoyed without gratitude the high wages I paid, but bitterly resented the boys' adoption of Western attitudes.

This feeling revealed itself again in an unfortunate incident that

grew out of purchasing wood for the school. Rachmet Ali told me he had found a man who had some apricot planks he wanted to sell to us.

"Are the planks two inches thick, sixteen inches wide, and free from cracks?" I put the specifications right to him.

"I don't know about such things, Sahib," said Rachmet Ali. "It's only a mile or so away; you'd better come and see."

"Look, I'm busy here. I'll show you how to measure things, and you go check up for me. If the planks are good, bring them."

So I taught him how to use a ruler, and marked two and sixteen inches on it for him. He returned an hour later, accompanied by the man who wanted to sell the wood. They had brought one plank, and it was thirteen inches wide, one to two inches thick, cracked up the middle, and pitted with dry rot. I told the owner that I couldn't use it, and paid him one rupee for the coolie who had carried the board.

The man started back with his plank, but on the castle stairs he passed Hayat, who was returning from a long errand. Hayat came on into the schoolroom. "Hah!" he cracked at Rachmet Ali, "can't you even tell rotten wood from sound?"

At this point the owner of the plank reentered the room. "So!" he screeched, "you're the nasty traitor who teaches the Sahib not to buy from Baltit people! You—!"

Hayat and Rachmet Ali both jumped. They had thought this was their private war. Hayat recovered fast, and yelled some answering unprintables. Rachmet Ali and I pushed between Hayat and the other.

"Neither Hayat nor anyone else tells me from whom to buy," I told the fellow sharply. "You tried to sell me rotten wood and I refused to take it. I paid your coolie—which is more than you deserved—and now you force your way into my house and insult my men. Get out of here and stay out!"

As he turned to go, he loosed more obscenities at Hayat, who retaliated and tried to hit him. We spent an athletic five minutes getting him out of the castle. Hayat was sobbing with rage.

I waited ten minutes to let the tension ease, then walked down to the little trail crossing in Baltit. The man was orating to a group of interested loafers. Heads were peering from every doorway.

"Look," I told him, "you have invaded my house and seriously insulted everyone in it. In return Hayat insulted you. We are willing to forget all of this if you will shut your mouth and go home. Otherwise I must complain to the Mir; I cannot permit such actions."

"I'm not afraid of you!" he yelled, leaning toward me. The on-lookers were stunned to silence—such insolence to a Sahib!

"I don't want you to be afraid," I replied steadily. "Just think a little! Don't let a short quarrel with a boy grow into a bad thing."

Three fellows grabbed him, urging him to be sensible, and approving words came from every doorway, but he wanted to show how big he was. He cupped his hands to his mouth, and shouted all sorts of obscene curses on Hayat and my household for the whole village to hear. I turned away and walked swiftly down the trail to the palace. The Mir listened quietly to my complaint. He agreed that an immediate trial was necessary.

Next morning the old Wazir and the two Baltit lumbarbars held court in the sunshine on the castle roof. The four of us sat in a row, on chairs my school had made, with the defendant's family seated along the parapet and my school ranged opposite them. This was to be a local trial, with appeal to the Mir's court only if the man or I wanted it.

Court convened about nine. It was all in Brushuski, but the Wazir translated for me.

First I testified, in Urdu; the Wazir translated to Brushuski. Then the defendant testified, then Hayat. Rachmet Ali testified, and to his credit he was entirely fair to Hayat. Then came Mano, all of the boys, and finally the defendant. Once or twice Hayat and his opponent grew a little hot, but the Wazir never let them speak except to the court.

There were no speeches or pleas—only testimony. Finally the Wazir looked at the lumbarbars.

"It seems to me," he said, "that we have two cases here. First there is the quarrel in the castle. Second there is this man's conduct in shouting bad words in Baltit. Let us consider the first case separately."

I had emphasized the man's forced entry and the fact that he started the whole thing, but none of the judges was interested in assessing responsibility. They were concerned only with who called the worst, most damaging names. They took repeated testimony on exactly what was said, and finally decided that the damage was equal. Hayat and his enemy were placed under sixty rupees' peace bond, to be collected if either of them spoke to the other or said anything evil about him. This legal principle was new to me—to decide a quarrel on the basis of damage done rather than of responsibility for starting it.

"Now," said the Wazir, "let us consider the second case." This took only ten minutes.

"We find," said the Wazir, "that the Sahib said only good things

to this man. The man had no right, therefore, to shout bad words in public at the Sahib's house. It is not the custom of Hunza to tolerate statements which ruin people's honor. We find the man guilty of using bad words publicly; it is for the Sahib to say whether he will accept an apology or wants the man punished."

I thought fast. The apology would have satisfied me, of course, but Hunzas have no respect for clemency.

"If the man be punished," I asked, "what would be done with the money? He is not wealthy, and I certainly want no part of his money as damages."

"No, no!" the Wazir chuckled, "half of his fine would go to the judges, and half to the Royal treasury!"

"Then let him be fined, but let it be the smallest fine the court can assess."

They fined him the minimum, fifteen rupees.

"Does either party object, or appeal to the Mir's court?" asked the Wazir.

Neither of us did. Honor was satisfied all around, and court broke up. The Wazir muttered to me,

"You did exactly right! They'll all respect you for being stern, and still they know you aren't mean and revengeful!" Then he went home.

The two lumbarbars remained, rather awkwardly. Hayat quickly invited them in "for tea," while Sherin Beg murmured to me, "It's custom for the winner of a case to give presents to the court. About six rupees apiece, and three for old Dolat, will be right. It should equal the fine the loser paid!" I gave them their presents, and they departed happily without waiting for tea. Legal cases are unprofitable in Hunza, as they are everywhere else. The Wazir could not honorably ask for a gift, but sometime later a rumor reached me that he very much wanted one hundred feet of good rope. Since I had the only good rope in Hunza, I sent it to him. Now I understood what kept the cases before the Mir's court down to a minimum. I also realized for the first time that the court must form a real source of income to the Mir's treasury.

Meanwhile, a new variety of trouble developed. Last summer in Lahore I had bought good second-hand coats. When the boys returned to school, each had received an issue of a coat, pants and shirts, and eight pairs of socks from America. I had also bought Hayat and Beg fine new suits, in anticipation of their trip to America. Now I sensed a

growing hostility from the schoolboys, but couldn't tell what it was about. Finally Burhan and Suleiman, my two most honest boys, came to me.

"Sahib," they said, "we think that you have played favorites. Hayat and Beg received much better clothes than we did. How can you expect us to work for you if you treat them better than you treat us?"

For an instant I was too angry to speak, but I got hold of my temper and told them we would discuss the matter at a *durbar* the next morning. During the night I thought the situation over carefully and realized how natural their feeling was. I also realized that probably Hamid had been building their normal jealousy into an organized revolt, but once more his mischief had been so skilfully done that I couldn't prove it.

After breakfast we sat down in a circle on the castle roof, and I asked them to state their grievances. Burhan and Suleiman spoke for the group, repeating that they felt I had played favorites.

"You've been with me nine months, and I pay you all food and clothing, ten rupees a month, and let you go to school?" I asked.

"Yes, Sahib, but this time you got much better clothes for Beg and Hayat than you did for us!"

"That's right," I replied. "But Beg and Hayat have been working for me two and a half years now—they're entitled to better things. They worked for me fourteen months before I gave them as much as I give you. So I haven't really played favorites. Have I done for each of you less or more than I promised when you first came to me?"

"Much more, Sahib!" in chorus.

"Very well. There is another thing I want you to understand. I have been telling you that we would run a regular woodcarving factory, as soon as you have learned how to make things." I paused, wondering how best to say what I must. "It now seems that I shall not be able to come back to Hunza, or to send anyone else in my place. I want very much to see the factory start, for all of you. I have planned to take Beg and Hayat to America, to give them the added training they will need, then let them come back and run the factory here in Baltit. Each of you will then become district manager for the woodcarvers in your own town. But unless Beg and Hayat go to America, this cannot be. The fine clothes I bought for them are necessary for the trip which, *in'sh Allah*, they will make. I would love to give all of you clothes as fine, but I do not have the money. Now is it clear to you why I did this?"

"Yes, Sahib"—in hushed tones. I returned to my work, upset that I had not avoided this situation by explaining in advance. Five minutes later, they came to me in an embarrassed group.

"Sahib," said Burhan, "we have acted ungratefully, and not as your sons at all. Whatever punishment you think is right, do it to us. Send us back to our homes, if you think best."

"Nonsense!" I said. "You did wrong, but I did wrong by not explaining to you before. Now we're all sorry and it's all finished. Let's forget it!" So they did, and our days went on as before.

A few mornings later we had a general durbar about the apricot wood we used for our carving. It had one serious defect—its color. It was close-grained, hard, not splintery, and had a beautiful pattern, but the wood was almost as light-colored as birch. I explained to them that darker colored wood was better and that the commercial stains used in the world outside would be too expensive. Mano nodded agreement.

"Schoolboys here color their apricot-wood slates with soot!" they chorused.

"How?"

"They take the soot from the roof-beams of their houses and mix it with water until it's like thin mud. Then they put this on the wood. When it's dry, they rub it off and put on more. In two weeks, the wood is a beautiful brown color."

Hayat and I collected about thirty pounds of soot from the castle beams, and started to experiment. It worked, but much too slowly.

"Look, Hayat," I suggested, "there must be something in the soot that stains wood. Maybe we can concentrate the stain so it'll work faster. Let's try boiling."

We put five pounds of soot in a big kettle of water, and set it over the fire. The carbon separated out at once, in greasy flakes which gathered into lumps. We strained this out, and continued boiling the brownish-black liquid until Mirza chased us from the fire so he could cook supper. Next morning before breakfast I found that the stuff had separated into two: an upper portion of water with brown stain, and a lower, dark-brown, gummy fluid with a resinous smell. Hayat and I decanted the stain, then boiled both liquids until they were concentrated.

When we tested the stain, it worked! We had a stain that would "take" at once, turning the wood a walnut color. Unfortunately it produced a muddy, unpleasing shade.

Hayat smeared a little of the resinous liquid on a wooden tab.

"Hey!" he yelled, "this stuff is magic! It dries right away!" It

did indeed dry immediately to a hard, waxy, almost colorless varnish. We played with it for half an hour before I discovered its weakness—it washed off with water. We had made a start, but the first experiment was a failure.

"Sahib," Hayat said earnestly, not at all discouraged, "if soot has so many interesting things in it, who knows what may be in ashes?"

We boiled ashes most thoroughly for half an hour, producing nothing more than a nice dish of boiled ashes.

Hayat looked at me desperately. "Didn't you say that even in America scientists try many times before they succeed? Let's try mixing things with these ashes. What should it be—vinegar, or salt, or lime?"

I knew, of course, that vinegar would only neutralize the potash in the ashes, so I suggested we try lime.

We added a fistful of lime, boiled again, and dropped a test tab into the bubbling gray mess. In a few seconds it was a beautiful, dark red color. Hayat danced around that cauldron like one of Macbeth's witches. For the next few days we experimented constantly. We learned that boiling lime without ashes left the wood unchanged. We found that the stuff could be used cold, but required about two hours to work. Juniper ashes produced a brown color, and hardwood ashes the gorgeous red we had first seen. Smearing on the gray ash-lime paste made an opaque stain, but the pale greenish liquid strained from the brew gave a fine, transparent red. Then we tried its effect on different woods. The same liquid turned apricot red, mulberry a golden brown, walnut a bright green, and had no effect on pine.

Afterward we experimented with various herbal stains. We produced a purple, a scarlet, and another walnut stain, but they weren't nearly as satisfactory as the original one. We now had a suitable local wood and home-made stains.

Most important of all, Hayat had invented a new substance, out of local materials, to meet our needs. He had proved that these people could learn to be inventive, and my method of approach was working, in spite of all opposition. Why must the whole venture end now, just when success was coming? Another year of education and these boys could meet any problems that arose, without my help.

In the midst of our experiments, one of the Mir's servants brought a note requesting my presence at tea. What now? I wondered while I washed the stains from my hands and put on a clean shirt. As we sat down to tea in the palace reception-parlor, I found out.

"John," the Mir said, "I have given you a very free hand, but I do

not want you to do anything to hurt my Hunza. If this woodcarving business develops, soon all the apricot and walnut trees in Hunza will be cut down, and my Hunzas will starve. There is not enough wood in Hunza to support a woodcarving factory."

"The people in Gilgit told you this, didn't they?"

"Yes, but I am afraid it may be true."

"How many apricot trees are there in all Hunza?" I asked.

"About five thousand, John, as you know very well."

"How long do your Hunzas let a tree live before they cut it?"

"About a hundred years."

"Then all over Hunza they are now cutting a total of fifty trees per year, aren't they?"

"Yes, John."

I showed him in detail that each tree would yield 15 cubic feet of useful wood, or $7\frac{1}{2}$ feet if we allowed half for waste. Assuming that we made all that wood into pipes (the least time-consuming article possible), we could keep 222 men busy the year around making 26,700 pipes, just with the apricot wood now being cut in Hunza. Since we planned to make vanity boxes and candlesticks also, and they required more skilled work per volume of wood, Hunza orchards were in absolutely no danger from the proposed craft industry.

"Well, maybe," he agreed doubtfully, "but I don't want my Hunzas cutting too many trees, and I *still* think there isn't enough wood."

Of course he did, and I should have known that he would. There is no surer way to convince an unmathematical mind that a project is false than to prove it by mathematics. I wrote a report on the wood supply and on stains to the P.A., and sent it to him through the Mir, but I knew that it would not be believed. No one in Hunza or Gilgit had the faintest idea how to figure cubic footages of lumber, or knew the simplest details of the woodcarving industry.

The Mir's doubts were superseded by anger a few days later. The royal family was planning its regular autumn trip to Ghulmit; since they would not be back before I left, early in November, we decided to settle our financial account at once.

Ayash Khan sent me his record of my account with the Mir. I stared at it amazed, remembering my first day in Hunza, when the Mir and I had agreed to keep an account of only major items. Here was a list so detailed it included even "1 pint kerosene, 3 rupees" and "1 airmail stamp, 12 annas." Ayash had kept an account which would have done credit to the U.S. Treasury. I had kept no record of all the

medicine (totaling several hundred rupees worth), or the footlockers, or other minor items. Back at the castle I whipped my rough account into shape, finding to my gratified surprise that although it listed only the large sums, it came to almost exactly the same total as the Mir's account with me. When I returned to the palace, the Mir and Ayash were walking in the garden. I handed the Mir my account and waited. He stiffened with repressed anger as his eye travelled down the list.

"If there is anything wrong," I said, "or if I've made any mistakes, please believe that they are unintentional and tell me about them."

"No," the Mir's face was white. "We are sure there are no *unintentional* mistakes here! You must please excuse us—Ayash and I have work to do!" And they stalked off, leaving me standing beneath a chenar tree.

Next morning one of the Mir's servants came up to the castle to gloat over me.

"Yah," he jeered, "the Mir Sahib has told the whole court what kind of a fellow you turned out to be! Bring him a fine rifle when you enter the country, tell him it's a present, then charge him for it when you leave!"

"Did the Mir send you here?" I asked.

Immediately he whimpered that he had come on his own and would I please not tell the Mir? I ordered him out, grateful that at least I knew the cause of the Mir's displeasure.

Now what to do? Since the Mir had said there was nothing wrong, I couldn't change the account until he mentioned it, without losing face for both of us. The truth was that I hadn't the faintest memory of what agreement we had reached regarding the rifle, back in June of 1950. The Mir was probably right about it. (Six months later he mentioned it in a letter to me, and I was able to send him payment in full.)

Two days later the Mir had the old Wazir, a Pakistan Army major, and me as guests at a farewell dinner. He was cordial, but he dropped several hints which let me see how deeply he was displeased. I took him the fine telephoto lens from my movie camera as a parting gift. It softened him somewhat. Next evening he gave me a Hunza cloak, a hat, and a beautiful bolster embroidered by his Queen, as farewell presents.

The royal family left on the morning of October fifteenth. I went to bid them farewell at the place where the trail starts east down the hill into Ultar Nullah. Leading their horses, he and Ayash shook hands with me, and bowed stiffly.

"Goodbye, John," said the Mir formally. "My poor little country and I have been greatly honored that an educated foreigner should spend so much time with us. Please excuse all the inconveniences our backward ways must have caused you."

"No, no," I replied, deeply regretting his method of parting. "I am sure that many of my Western ideas have been a great annoyance to you. You and your country have been very gracious hosts and I have often been a rude guest. Please excuse *me!*"

On this note of almost Chinese diplomacy we parted. They swung to their saddles and rode off down the trail while I climbed back to the castle. How different from the friendly welcome when I arrived! But what matter, if only he would still let Hayat and Beg go to America!

A few days later, the Mir telephoned me from Ghulmit. News had just come to him from Gilgit that the Pakistan Prime Minister, Liaquat Ali Khan, had been assassinated. I thanked him and hung up. Pakistan had lost its great statesman, Mohammed Ali Jinnah, less than a year after it had gained independence. To be able to produce a second competent leader in the midst of their national birth had been a miracle. Now, only five years later, no one could expect a third to arise.

Through all these political events and local problems, daily chores, school, and the dispensary went on. One day Hayat came to me, deeply troubled.

"Sahib, my little cousin, Hidayat Ali, has been very sick for a week, and they only just now let me know. I know that you're sick, yourself, but will you come with me? They say he's unconscious."

We clambered down the cliff into Ultar Nullah, up the other side, and around the terraced hill to Hidayat Ali's house. The little boy was lying on a pallet in one corner of a clean-swept room, while his father sat over him chasing flies away. Two or three women huddled in another corner, chattering softly. His eyes were half-open, his mouth twisted horribly up and to the right, and he fretted in his coma. I took his temperature—105.8°! "How long has he been like this?" I asked his father.

"Five days, Sahib."

"Why on earth didn't you send for me before?"

"I was on a trip to Gilgit, and the womenfolk didn't have sense enough. I just returned today."

"How was he sick before he went unconscious?"

"He had a terrible earache, Sahib. You remember, you put medi-

cine and cotton in his ear three months ago? It got better then, but ten days ago it came back, and now he is as you see."

"The sickness in his ear has broken through the bone and has gone into his brain. I will do what I can for him."

Hayat and I injected 300,000 units of penicillin into his thigh at once. The poor little guy was hyperesthetic and moaned through his coma. Then I gave him four sulfadiazine tablets, crushed in water with a little soda, and we sat back to watch. Fifteen minutes later, he developed a tremendous blister that covered most of his foot. Why, of all people, must he have been the one sensitive to penicillin? Two hours later, his temperature had dropped to 104.8°. I made up a set of three powders, each containing two sulfadiazine tablets plus sufficient soda, and told the father to give him one powder at sundown, one at midnight, and one at sunrise. Then I told him to give Hidayat all the water he could force into him, and also to crumble dried apricots into water as food for him. The boy's throat was partly paralyzed, but he could still swallow liquids, even in his coma.

The father followed us out of the house. "Sahib," he said quietly, "I will stay with him all night. I will do just as you have taught me. He is my son, Sahib. I do not want that he should die. Please try not to let him die, Sahib."

"Life, death, and fate rest with God," I said. "I will do all that I can to help. Pray that my wisdom be strengthened."

"Thank you Sahib. I'll ask God to help you."

Hayat and I returned next morning, with sulfadiazine, our last aureomycin, a mild sedative, multivitamin pills, and some sugar for quick energy. Hidayat's temperature was 104 degrees and he was semi-conscious. His little 9-year-old body was shaken with pain, as I had thought it might be when he became nearly conscious. His brain abscess was affecting the third to the ninth cranial nerves on the right. I knew that even in the finest hospitals, with an immediate operation and the best treatment, his chance of recovery would have been slight.

Thereafter, Hayat and I made the trip twice a day. These walks, about a mile each way, were the only opportunity in our crowded days for me to teach Hayat, and we made the most of them. History, geography, philosophy—a different subject each trip. Hidayat's temperature came down once to 101 degrees, and hung between there and 102, but he did not recover full consciousness. What nonsense it is to talk about "fighting for your patient's life!" You try to foresee all the possibilities, you apply every technique and treatment that you can, and the fight

remains between the patient and his sickness. I did everything I could, and felt helpless every moment.

Little Hidayat died ten days later. He had seemed better in the morning, and Hayat made the two-mile walk alone that evening. He returned, his tanned face haggard, and when I asked him how our patient was, he muttered "as usual." Twenty minutes later a neighbor came to tell us that he had died.

"I knew it when I saw him," said Hayat to me, "his nose was pinched, and he looked different." How did he know the meaning of that moribund look?

Next day I received a large basket of fruit from Hidayat's father—to thank me for having done all I could for his boy. It was the gesture of a fine gentleman, and increased my grief at my inability to save his son.

My own health was degenerating rapidly. Twenty months of worry and dysentery plus my draining abscess had weakened me, and now my heart gave me constant trouble. I had to sit down for breath every few minutes on my walks to treat Hidayat, which wasted a lot of time. I also caught a case of boils from one of my patients; they developed on both hands, which made it very difficult to keep my hands sterile enough to treat patients.

The school was functioning excellently as closing time inevitably approached. All the boys were making good progress with their pipes and vanity boxes, except Hamid, who didn't try, and Hayat's cousin Ghulam Rasul, who had slipped happily into a role of general errand-boy for everyone else. Hayat and Beg were doing very well also, though their work interfered with school-time. Beg made a model airplane, like the ones in which he had ridden, with mica windows in the cockpit. Then he made a picture frame to hold the photographs of himself and his family that I had given him. Everyone admired the frame so much that he made several more for his neighbors. Hayat ran a little dish-repair service, using Duco cement. The royal family's dishes were repaired free, necessarily, but other well-to-do Hunzas paid four to eight annas (eight to sixteen cents) for repairs to their few prized china dishes. Beg and his brother Mirza drew Hunza designs in color on all of my remaining stationery. Mirza was willing to learn a little about color composition and use of symmetry, but Beg continued to make conventionalized designs freehand.* Either of them would probably have done well in a good art

* The circular design on the jacket of this book is an original Mirza.

school. A red-haired Scythian boy named Amir Beg, who saw some of Beg's designs, was entranced by them. He asked if he could join us as a day student, for no pay. He came in every afternoon after formal school. I taught him figure and landscape sketching for the first half hour each day, then he practiced while I did my other work. He rapidly developed into a first-class craftsman with real sensitivity.

One day near the end of October, I asked the boys to bring everything they had made up to the castle roof. Each boy was to place his carvings in a little pile, and Mano and I would rank them for excellence. There would be five prizes, from five rupees to one rupee each. The contest was a complete surprise to them; they lined up behind their work, each boy nervously glancing at his neighbors' achievements. Mano and I performed our inspection in a tense silence, with seven pairs of eyes on every move we made. (Beg and Hayat weren't in the contest.) We rated the boys separately, then retired inside for a conference. I had rated Mullah Madut first, then Nasar Mohammed, Nur-ud-Din, Suleiman, and Burhan, in that order. Mano had Mullah Madut first, then Burhan, Nasar Mohammed, Suleiman, and Nur-ud-Din.

Mano smiled when he saw the two lists. "Your rating is correct, Sahib, for excellence of the work. I know, though, how much of each boy's work is his own, and how much help I had to give. My rating is on the basis of what each did alone. The school is yours—use whichever rating you think best."

I used Mano's rating, of course. The five winners tucked their money away, then strode about the roof with proud, self-conscious grins. Of the losers, Ghulam Rasul had no ambitions, so he hadn't expected a prize and didn't care. Hamid's knowledge that his downfall was his own fault didn't make him enjoy it any better.

We had a farewell party as the time for closing drew near. I bought an extra sheep, and Mirza spent a day making a tremendous mutton pilau. All the boys, Mano, Rachmet Ali, rascally old Nasar, and I sat in a big circle on our dining room floor, under the tinkling glass chandelier, and Mirza served us. We also had a sheepskin bag of new wine. As the wine warmed him, old Nasar leaned back against the wall.

"Let's drink in honor of Clark Sahib!" he boomed. "Ah, how this brings back the old days of the Mir Ghazan Khan! How this room used to be crowded with Hunza men, what stories we told, and how we all laughed!"

"And how much you all drank, too!" Sherin Beg grinned.

Nasar agreed, and they drank the toast. Then I proposed one to

the beloved Mir Ghazan Khan, which pleased Nasar tremendously. Several of the boys danced, while the rest of us sang, and at last the party was over. I kept the wine down to the minimum required by custom, so the celebration remained well in hand. We all went to bed on the roof feeling happy, although closing time was too near for any singing.

A few days later, Mano and Rachmet Ali asked me if they could give the boys a farewell party in the castle. I agreed at once, so we had another party like the last—an evening of cheer and good companionship.

Sherin Beg and Mirza came to me quite shyly that same evening. Their family, they said, wanted to give me a farewell meal at their father's house tomorrow, and would I come? I replied that I would be honored.

Around noon the following day, they led me down the shady trail, through orchards aglow with autumn, to their adobe house below Baltit. Their father and an uncle met us in the doorway and escorted me through a dark room up a shaky ladder to the roof. We sat on a small rug, looking out over the beautiful valley. Life was peaceful with these quiet men; it was good to enjoy their company.

Beg and Mirza served us our tea, chapatis, and mutton stew. Being still young, they were not allowed to sit with the men on a formal occasion like this. My hosts understood no Urdu and I very little Brushuski, so Mirza hovered near to interpret, but this was a special arrangement to meet a special situation.

After dinner, Mirza hurried down the ladder and returned carrying a fine white Hunza cloak on both outstretched arms. His father took it from him and hung it over my shoulders.

"We want to give you this," he said, "to thank you for all you have done for our family." A wide band of beautiful embroidery bordered the whole cloak, and a complicated floral design decorated each breast. This, I knew, meant several months of work by the women of their family. These people, the real gentlefolk of old Hunza, were thanking me for what I had tried to do.

Two days later, Rachmet Ali gave me another fine embroidered cloak. Then Hayat brought me a woolen suit, tailored of white Hunza cloth by a local man who had once been down-country. They were all giving me the best they had to show their friendship; coming after all the enmities and criticisms, and my own errors, their appreciation restored my faith in Hunza and in what I had tried to accomplish.

As closing time drew near, old Api, our self-appointed house mother, grew more and more attentive to the boys. She spent all her

spare time sewing on buttons, mending ripped shirts, scolding away at them in tones which deceived no one, and surreptitiously doing the greater part of their cooking for them. One afternoon as she met me by chance in the outer passageway, she broke down completely. She threw her arms around me and sobbed, "You and your boys have made me happier than I ever was before! When all of them go, I won't have anyone to take care of!" I let her have a good cry, and thanked her for what she had done. Finally I gave her some pretty thread and two nice aluminum pans as a farewell present. She shuffled off, beaming through her sniffles like a little child. May God send her some other boys to watch over, for her sake and theirs. She was a wonderful house mother to mine.

On November fifth, the day before closing, we had a final little celebration in the dining room. Afterward I gave each boy his pay, a bonus, his share of the carving tools, and a packet of the simple first-aid medicines I had taught them all to use. They packed these carefully with their spare clothes.

Early next morning we all rose. The boys rolled their clothes in their bedding, and lined up on the old castle roof. I stood beside the head of the stairs.

"*Salaam Alaikum*, Sahib," Burhan Shah saluted, shook my hand, and started down the dark stairway.

"*Khoda hafiz*, Burhan," I replied, "May God protect you."

"*Salaam alaikum*, Sahib"—it was Nur-ud-Din, hanging his head shyly.

"*Salaam alaikum*"—"Salaam alaikum"—boy after boy shook my hand and swung on down. I watched from the parapet as they left the outer door and turned east into the cold gray wind. Just a little knot of moving tan, into the raw cliffs and stark winter of the canyon. Never again would I be able to teach them. *Khoda hafiz*—may they all be protected. They were good boys.

On November eighth, I divided up all of the equipment among Hayat, Beg, and Rachmet Ali, and gave Mano a bonus. Akbar, our chestnut horse, went to Beg, and Badakhshi to Hayat. Rachmet Ali received two of the four saddles. Hayat was put in charge of the lathe and carpenters' tools, with special instructions to sell them rather than let them be used for other than school purposes. Then we all left for Gilgit, Hayat, Beg, Mirza, Rachmet Ali, and I.

The old Wazir met us as we passed his front gate; I dismounted to

say goodbye. "*Salaam alaikum*, Sahib," he said. "We are sorry to see you leave." From here on, it was necessary to dismount and walk almost the whole six miles of the main oasis, shaking hands and taking salutes the whole way. The people were as grave and reserved as usual, but they were giving me a kind farewell.

Two days later we crossed Gilgit bridge and turned through the corner of the main bazaar. How different from the sleepy little Central Asian town I had first entered three years ago! Gone were the woolly, two-humped camels out of Turkestan; instead, two army jeeps were honking their way slowly through the busy crowd. The Aziz Brothers' store had once proudly displayed candles and a few spotted tins of aged British beef; now their counter overflowed with fresh canned goods and kerosene lanterns. Khalifa Jan's cloth shop, next door, was piled with bolts of gaudy prints and gray cotton workcloth from the mills of England, where formerly it had contained coarse white homespun. Planes from Rawalpindi and dromedary camels from Peshawar were bringing in supplies from all the world. Gilgit, and Hunza, had become a part of Pakistan, joined to the rest of the civilized world. Haibatullah had gone to Yasin to be married, so we had no ties to break in Gilgit.

Permission to take Hayat and Beg to America had not yet come, although I had telephoned the P.A. about it from Hunza several times. Now I learned that the P.A. was out on tour, but had left word that the boys and I should proceed to Rawalpindi, where permission would surely be granted. We flew to Rawalpindi, rented hotel rooms, and hurried to the Ministry for Kashmir Affairs. The secretary looked at me in astonishment. Why had I brought the boys? he asked. Hadn't I been told?

"Told what?" I could only stare at him. "I've heard absolutely nothing!"

"You were to have been informed seven weeks ago that permission was denied," he replied.

The boys were absolutely stricken, as was I. I sent them back to the hotel, and began a desperate round of Government offices. For a full month we tried, going daily from office to office. At least one senior official did all he could to help us, but it was no use. The Mir and all the local Gilgit officials had objected, and policy would not allow over-riding their opinion. I telegraphed the Mir and received a noncommittal reply. After four heartbreaking weeks we reached the end of possibilities. We had seen every official who could possibly have influence.

Quietly we said goodbye, and I put them on the plane for Gilgit. I

watched it skim lightly from the runway, circle once, and wing north toward the mountains, bearing them back to tyranny I had not broken, ignorance I had not lifted, poverty that I had not relieved. These two boys had learned the best of Western philosophy. Now they must return to face Old Hunza without my help.

Letters from Hayat to John Clark

Lahore, West Pakistan, 2 December 1954

My dear Father: I received your letter and I read it twice. You know my mind wishes to come to America. May God wishe me to come there. I understand about your arrangement for me. I am thanking you and your friends. [The Central Asiatic Foundation is having Hayat tutored in Lahore and plans to send him to the University there, or if possible, to bring him to America.] I pleased to receive the box of clothes from you. The suit fit me very good on my body. I spent some money for a drawing master to learn drawing. You know I want everything to learn . . . and sometimes I am very sorry I do not know what means the education. You have written about money. The sum is enough for me. I know how much needs for you in America. I saw Sherin Beg two months ago when he came back from Hunza . . . [Sherin Beg is serving in the Pakistan Army.] . . . *January, 1955*: All people know [think] that I am an American young man and also that I have a little English to talk. I am interested by Law and Engineering. I want what you wish. Please tell me about it. . . . *June, 1955*: I went to Rawalpindi on 17 May to see my cousin. He brought me gifts from my family. My father paid his blessing to you. Please tell me there is no difficulty with your book on Hunza.

Please pay my respects to my grandparents, and also your respectable friends.

I am,
Yours Affectionately Son,
Gohor Hayat

EPILOGUE

The Future in Asia

HUNZA is a tiny segment of the heart of Asia; its hopes are Asia's hopes and its problems, on a vastly greater scale, are Asia's problems. My experience in Hunza was really a study of all Asia on a directly personal basis which dramatized general situations. Let us, if this book is to serve its purpose, consider Asia in the light of what happened in Hunza.

It becomes obvious at once that both physical and spiritual elements are involved in the turmoil of today.

Basic to all other physical problems is the tragedy of too many people for the land to support. Migrations, wars, famines, and pestilences have killed millions of individuals without perceptibly halting the increase.

American attempts to solve the problems of Asian poverty are based on the experience of our own uncrowded past. More effective use of the resources at hand has enhanced our permanent prosperity, so we assume that the same process will achieve the same result in overcrowded Asia. Agriculturally, we have advised Asians to distribute their land more equitably, to use better seed and fertilizer, to bring more land under the plow by irrigation. As a second great solution we have recommended industrialization. We have given Asians factories and power plants, large sums of money, and numerous technical men, in order to carry out these twin programs, without too closely considering their possibilities and limitations.

The agricultural improvements are useful and desperately needed expedients. They should be encouraged, provided that they are introduced at a rate the community can absorb, and are clearly understood by both Asians and Americans to be temporary palliatives rather than permanent cures. In Hunza, for example, farm implements are made of wood, herding practices are inefficient, and the Mir owns about one-quarter of the best agricultural land. Metal farm tools could be introduced to advantage, and would be accepted at once. Agricultural machinery would be useless, because the fields are too small and the

terraced slopes too steep. New herding practices would increase the meat supply about twenty per cent; they could be taught only by example, which would take about ten years.

If all these things were done and the Mir's land distributed equitably, the farmers and young men who have been emigrating would remain in Hunza, and the death rate would decrease. Within five years, Hunza would be as overcrowded as it is now.

Asia can and will industrialize, but her mineral resources and food are much less, proportionately, than those of the West. Industrialization brings prosperity only when the industrial community has a source of cheap raw materials and a prosperous agricultural community with which to exchange manufactured articles for food. Asia includes most of the people on earth, therefore her major trade must be with herself. Asian farming regions, in general, cannot produce the excess of food necessary to trade with a large industrial district. When there are more people than food and materials, then the value of labor will be worth less than the food and materials, and the people will be poor, whether they work on a farm or in a factory.

Our advanced Western agricultural and industrial techniques are useful expedients that should be shared. However, they can at best improve the Asians' prosperity for only a few years. Effectively, they enable us to pull a drowning man to higher ground in order to keep him alive while we try to dam the flood which otherwise will overwhelm all of us. Neither the West, nor Communism, nor any other culture has yet found a permanent solution to the problem of human increase.

The underlying spiritual problem is that the old, static cultures no longer satisfy. Contact with the West, either directly or second-hand, has reached the outermost nomad, the deepest jungle village. More than a billion people have learned that we live happier lives, perform more interesting work, and enjoy greater physical comforts than they do. Their own cultures have not given them these things, and they are determined to possess them. Most Asians desire all of our advantages with as little change as possible in their own customs.

Therein lies confusion in their thinking and in ours. Since World War II, they and we have proceeded on the misconception that industrialization and scientific techniques are the roots of Western civilization. We have poured into Asia money, machines, and technicians on an unprecedented scale. This well-intended effort has generated increasing confusion, avarice, and hate, as any material gift is bound to do.

What Asians really want is not to be given factories we have built

for them, but to be as competent in meeting their own problems as we are. Spiritually and intellectually they want to be free, just as we are free. You cannot raise apples without an orchard, and eating your neighbor's apples does not start your own seedling trees. We and they have been confusing machines and techniques, the fruits of our culture, with the philosophies which are its roots. It is not enough to own a factory—it will soon wear out; or to learn to build machines according to a plan—one must then depend always upon others to draw the plans. If Asians are to be free, they must be able to recognize a need, invent a technique to meet it, and put the technique into operation. This is the basic process of any dynamic civilization.

The boys in my craft school were incapable of independent progress when first they came to me. Boys who sawed wood along straight lines "because you are our Sahib, and you tell us to" could do nothing more than learn procedures that others have devised. Less than a year later, those same boys invented a new wood stain, designed and made a drill to pierce pipe-stems, and were able to visualize combining the donkey with jeep wheels to make a cart. They were then competent to think for themselves, because they had unconsciously shown me that a lack of five fundamental ideas was inhibiting them. As soon as I taught them the five ideas, they started to move ahead.

During the last hundred years, a thin scattering of missionaries taught just a few of these five powerful ideas to a few Asians. Unconsciously taught, mixed with religious dogma, obscured beneath sectarian inessentials, they were still the yeast that started the tremendous ferment of today. Only when Asia has accepted and absorbed all five will her orderly development be assured.

The first is objectivity. The ability to remove one's own feelings, one's own welfare, from the problem at hand. The young Qadir who thinks, "Am I creating the proper impression of a competent geologist?" can never become a geologist because his mind has no time to think, "What do these rocks mean?" The ruler who says, "In Hunza everyone has just enough" can never recognize the needs of his country, because his concern for his own loss of face has blinded him to the poverty all about him. Only by objective consideration of the situation at hand can any progress be made.

The second is dissatisfaction: the belief that everything can be done better, or quicker, or more easily, no matter how good it may be at present. Nothing is perfect, nothing is ever good enough to satisfy the West. At one blow, this does away with tradition, fatalism, and apathy. It is

the spur of all invention and discovery. Losing it, any culture ceases to progress. Hunza people have suffered from cold houses for two thousand years, because it is fate that winters be cold and no one was dissatisfied enough to invent a chimney or a door that fits its frame.

Third is creative confidence. Dissatisfaction can arouse rebellion, but only the belief in one's own ability to improve the situation can transform resentment into constructive effort. Faith in oneself and in the possibility of improvement are vital ingredients. Without it, objectivity and dissatisfaction produce Communism. Self-confidence and hope for the future was the most inspiring of all the five ideas to the boys of my school. It gave them such dignity that at first they hesitated to accept it, fearful that this was something too wonderful for them to merit.

Fourth is the value of the individual. A man who is capable of objectively studying a situation, realizing that it can be improved, and taking active steps to improve it becomes of enormous value to himself and to his group. The worth of Hayat's new wood stain was not important; the fact that he had created it gave him dignity and self-respect. No longer are such a man's family affiliations, his ancestry, or his possessions significant. He himself becomes the important social unit, not his family. All of the structure of his society must be built around him as a contributing individual. He will not be fitted as a cog into a machine State, nor subordinated to a dynastic ruler. Moreover, he will apply himself vigorously, because his right to the dignity of individuality depends upon his ability to observe, criticize, and improve.

Last is the sense of responsibility. Dedication, empathy, love—responsibility has many names that are but aspects of the one great thought. Hayat has learned to be objective, dissatisfied, full of creative confidence, and possessed of self-respect. However, unless he feels a strong responsibility and a sense of empathy toward his community, he will live, intellectually lonely, in the same discomfort and poverty his fathers knew. The responsible man feels a firm determination that all men shall have the privilege of elevating their own dignity as he has done. He develops whatever systems of organization and voluntary cooperation are needed to help his fellows. He will not demean the less fortunate by tossing them gifts, but will rather assist them to the same opportunities he has enjoyed.

Objectivity, dissatisfaction, creative confidence, individuality, and responsibility—these are the five fundamentals in the Western philosophy. They have made possible the spiritual, intellectual, and physical

development which the rest of the world desires. These are our unique possession, and these we must freely give.

There is but one way to give ideas, and that is through the people who hold them. What Asia needs today is not millions of dollars but rather thousands of the best of our Western teachers. Whether the great ideas be taught through woodcarving or agricultural improvement or mathematics does not matter, so long as these specific projects are vehicles of instruction and not ends in themselves.

Such teaching will be joyously received by all those young enough or flexible enough to accept it. It will be bitterly opposed by two groups. The archaists, like the Mir of Hunza and the P.A., will fight literally until death to preserve their old systems. The futurists, like Qadir, will demand change at once, change by violence—spoiled children shouting for cake before the meat and potatoes. The majority of mature people may hesitate to accept a new philosophy because they fear the destruction of the good things in their own culture by the foreign ideas. Their antipathy will disappear when it is explained to them that the philosophy of five ideas is not a plant sprouted in Western soil and nourished with American rain; it is not being transplanted in order to choke out Eastern flowers. Rather, it is a code of faith which had its beginnings in the earliest civilizations of the Near East. It passed from hand to hand, through Greeks, Romans, Arabs, and finally, after the Crusades, to the West. We have the honor to offer Asia, not an untried bright idea, but rather a philosophy developed and tested through several thousand years in many different cultures.

Whatever Asian groups accept it will forge ahead, using both old and new ideas in the solution of their own problems. They cannot become Communist when they have learned that hope lies within themselves as individuals. They will not become Westernized, because their new philosophy requires that they develop their own answers. They will not remain mired in their traditional cultures, because their new philosophy has freed them from tradition.

In the light of our dual basic purpose, to help Asians meet their immediate problems and to teach a philosophy which will enable them to develop their own civilizations in the future, what should American foreign policy be?

First, let us stop at once the ruinous system of large, direct gifts from the American government to Asian governments. Such gifts are expensive to us and always breed avarice and resentment on the part of

the recipients. My experience with the Mir of Hunza was completely illustrative. It is no coincidence that the Chinese, to whom we gave most, chose Communism, and that the Indians, to whom we are now giving tens of millions, irrationally dislike us. We gave least to Islam, so that Moslem nations remain our most faithful friends in Asia, despite the blows we have unintentionally dealt them in Israel and Kashmir.

Second, let us work entirely through the established private agencies which have been operating successfully for decades in Asia. The Near East Foundation, the Rockefeller Foundation, and several others have proven their ability to help without begging, to teach without enslaving. Let us support projects which these agencies operate, rather than attempt to work directly as a government within Asian nations or to support the Asian governments. This policy has already been amazingly successful wherever it has been tried; it should therefore be made universal.

Third, all projects should be on a scale the local community can absorb, but conducted on a wide geographic basis. No twenty-million-dollar steel mills, but rather twenty-thousand-dollar projects in a thousand villages.

Fourth, every project must be evaluated in terms of its usefulness in teaching the five basic ideas. A project which cannot be used to teach these ideas is charity and will not succeed.

Fifth, all government-aided educational projects should be at primary and secondary school levels, where ideas and attitudes are inculcated. Most students at the University level have passed the point where their philosophy can be molded. Training of advanced technicians is, therefore, chiefly a matter of concern to the individual and his own government. There can be no more tragic mistake than placing Western techniques in the hands of men with an Eastern philosophy.

Finally, large-scale Asian development projects should be evaluated and financed on a straight business basis. This should be done through the World Bank or some similar organization; our government as such is not an international bank. Any major industrial project which is economically unsound should receive no capital, because United States financing of noble but unsound projects leads to Asian inefficiency and bankruptcy, and to mutual ill-will. We cannot buy friends, and we should not stoop to attempt it.

ABOUT THE AUTHOR

JOHN CLARK, BORN FORTY-SEVEN YEARS AGO IN CHICAGO, is now a research associate in the department of geology at Princeton University. A holder of four degrees in geology (one each from the University of Illinois and the University of Pittsburg and two from Princeton), this energetic man has split his career between teaching and study in the university and geological adventuring in the American West and in the far-distant reaches of Central Asia.

Dr. Clark served more than four years in the U. S. Army during World War II, mostly as a long-range reconnaissance officer on the general staff of the China-Burma-India Theater, in northwest China, in Iran, and in India. It was here that he had the disturbing experience of seeing the Russian Communists win the friendship, and thus control, of neighboring undeveloped peoples through simple methods that raised the living standards of all the natives. After the war he tried, in vain, to interest the United States Government and the American private foundations in these practical, inexpensive ways of making new friends and of assisting technologically backward peoples. Nobody was interested.

So Dr. Clark went alone to Hunza, in mid-Asia, to see what one American could do. This book tells what he did there. He expects to return to Hunza shortly after the book's publication.