

## INSTITUTE OF CURRENT WORLD AFFAIRS

GSA-24  
India: Ladakh, Strategic scenery-II.

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Dear Dick,

The Indian Army is in Ladakh because of the Chinese. Facing them, the army has to contend with two major difficulties: communications generally and roads in particular, and altitude. Ladakh, as I've said, begins at 9000 feet above sea level and goes up to about 28,000. Parts of the Indus valley are nearly 14,000, and the average height of the Indian forward defensive positions, according to the commanding general's chief of staff, is about 16,000 feet. These positions are a long and looping necklace of "pickets" or bunkers strung about the shoulders of precipitious middle-altitude peaks. Patrols often go to heights of 21,000 to 22,000 feet. These altitudes would be handicap enough for military operations, but the altitude is compounded by the door-knob barrenness of the area. The absence of vegetation increases the effect of height by 1000 to 2000 feet. A forward formation headquarters at 13,200 feet, such as the one at which we stayed a night, is, in effect, about 14,500. Why vegetation that consumes oxygen should also enrich the air and make it more nourishing to the lungs, I don't know, but everyone we met in Ladakh commented on this increased altitude effect, and many officers and officials there who had served on the Northeast Frontier above Assam where the vegetation is heavy were in a position to make the comparison. Looking (far) back to my youth and climbing in the vicinity of 14,000 feet in the Western United States, I can remember no sensation akin to the slight drunkenness, enervation, and deep gut-breaths that resulted from moving faster than an amble in Ladakh. I also had an almost constant headache, and even men long in the area suffer from this. These feelings were partly due to age, lack of condition, and lack of acclimatization, but there is a qualitative difference between West Himalayan altitude and that elsewhere.

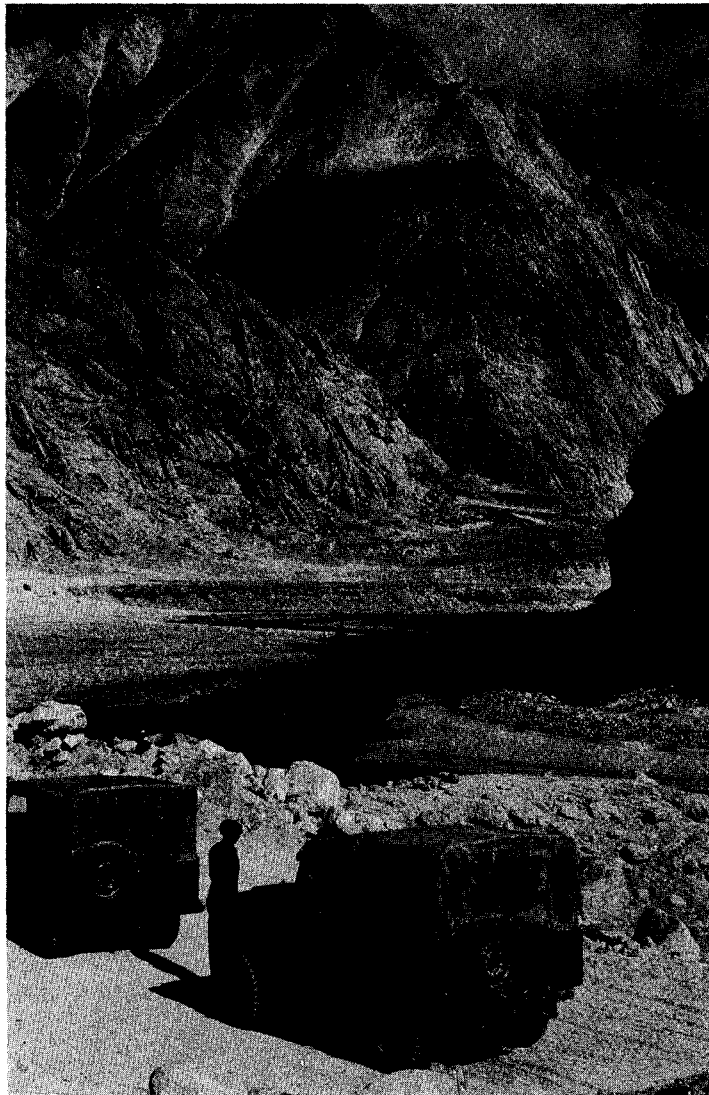
The army makes ample allowance for this. In our case, for example, they put oxygen bottles in our rooms in case we should need some. Evidently visitors usually feel the need at night, and this may come from lying down. The early explorers of the area often reported having to sleep sitting up to avoid dizziness and other discomfort. The army didn't want us to leave Leh and go up the Indus with a consequent increase in elevation, because on two previous occasions guests have been taken ill. One got pulmonary edema, in which, so it was loosely described to me, the lack of oxygen causes the lungs to fill with blood. Unless oxygen is administered quickly and the patient is

evacuated to lower altitudes within a few hours, he dies. Soldiers can get pulmonary edema, too, even after acclimatization. If a man at a picket is taken sick, he is brought rapidly down, given oxygen, driven a few miles to the nearest helicopter pad, and whizzed off to the hospital in Leh and if necessary to the plains.

Soldiers coming into Ladakh from the plains are kept at Leh for from three to seven days before being sent to forward areas. When they are sent up to battalions and companies, they serve at the camps and depots at lower altitudes for at least three weeks. Only then are they assigned picket duty. The physical condition of these men, including, of course, officers, seems to be terrific. They're tough, know it, and are proud of it. One young lieutenant was pointed out by his buddies as the record holder to a particular picket. From the riverside near the camp at 13,000 feet, it was 2500 over the shoulder to the summit and the picket. The trail wound in tight hairpins and a mule train carrying supplies looked like a file of fleas. His time going up was an hour and five minutes. The descent, right down the middle of a scree slope in sliding bounds, took nine minutes. Although mules are used for packing, the men also carry supplies as well as (almost daily) heavy timbers for strengthening bunkers. There's no water at the pickets, unless one happens to be in a snow area, and so tea at 16,000 feet is made of back-packed Indus water. Officers right up to the rank of Brigadier (equivalent to our Brigadier General) inspect the pickets manned by their troops, and younger officers themselves command the pickets. The number of chairborne officers seemed commendably small. The army doesn't fight only on mountain tops, however. Soldiers at the pickets only have light arms, rifles, machine guns, and perhaps light mortars. The heavy stuff like artillery and large calibre mortars are in the valleys and would arc their fire over the ridges onto the enemy.

Altitude has its effect even on well acclimatized men. A brigade major told me that it took him two hours at 13,000 feet to do paperwork that would take one hour on the plains. "We even think slower up here," he said. Men apparently have more stamina and energy their first year in Ladakh than during the second, and stamina declines steadily thereafter. Except for the native-born there seems to be no permanent acclimatization. A brief stay at low altitude is not enough to prepare a man for a further long stay in Ladakh; there must be, so the army believes, a six-month or a one year period before a man should return for a second two-year tour. There is some evidence that the Chinese have the same problems. And fighting the Tibetan rebels the Chinese are at a special disadvantage because no outsider can function so effectively as a local person at these heights.

To maintain the fighting fitness and spirit of the soldiers, the army does remarkably little in the way of extra attentions. Medical facilities are evidently good, although perhaps no better than in other areas except for the emphasis on rapid evacuation to a base hospital. There is little in the way of entertainment. Film stars from Bombay put in an occasional appearance and there are movies. In the more permanent encampments a nissen hut serves as a cinema, and mobile cinema units go to more forward areas. A soldier may get to see two films a month, we



**THE INDUS VALLEY:**

Some of the milder scenery in which the army operates. The jeeps are Nissans and their numbers were deleted by military censorship.

were told—except in places like Leh, of course, where men may see shows more often. The cinema in Leh is small, though, and the units attend by rotation. Compared with the entertainment provided for American troops, this is meagre indeed. But the officers say that the men don't mind, that they are happy to sit around and 'bull' among themselves. The burden of loneliness, they say, falls on the officers, who are better educated, more sophisticated, and used to different pleasures.

There is the mess, where there is ample liquor, good food, and good companionship (One mess had a very chic interior including barstools covered entirely in white sheepskin.). But this palls after a while and the common remedy is books. One married senior officer thus described his off-duty life in a letter to a friend: "I read--good books and trash; I think--a lot; and I sleep--alone." The distinction between the life led by the soldiers and the officers is one of background more than rank--and the difference in backgrounds is infinitely greater than in the American army. Kipling, I think, once wrote that until there could be an army officered by gentlemen and manned by gentlemen, the best army would be officered by gentlemen and manned by rogues. The Indian army of today is led by educated officers and manned by peasants. The entertainment of peasants, as one still finds in the villages, is smoking and talking. So the lack of formal fare affects the men hardly at all and the officers much more.

Both officers and men in Ladakh get special food and extra pay. A soldier at the bottom of the scale, for example, gets sixty rupees a month base pay and thirty rupees altitude allowance. The diet is varied and rich with emphasis on ingredients needed at high altitudes in desert conditions. Everyone gets all the tea, thick with sugar, that he can drink, and an almost equal amount of cocoa if he wants it. Emphasis is on protein. Milk, eggs, cheese, meat, lentils, and so on are plentiful. The daily intake of calories approaches 5000--the average American, I think, consumes about 3500. Because altitude often lessens hunger and because foods like cheese are strange to most soldiers, the problem is not so much getting food to the troops, but getting them to eat enough of the right things. Leave for the army in Ladakh is the same for the army generally, two months a year standard leave and a month more of casual leave. Casual leave is not always used up and is reserved for personal responsibilities, marriages and deaths in the family, repairing the family house damaged in the monsoon, etc. Very generously, the army reckons leave from the time a man reaches Pathankot, either going or coming. If flying weather prevents his exit or return, this is not subtracted from his leave time.

The officers we met claimed that the morale of the men was high. They said that the tough conditions and being on the front line facing the national enemy produced the good spirits. We couldn't investigate this, but found no reason to doubt it. The older officers who have seen combat either in World War II or against the Pakistanis in 1947-48 or against the Chinese in 1962, wouldn't at all mind a scrap with the Chinese. Only if they get one will we know for sure how much talk of good morale means.

Apart from altitude and all its ramifications, the army's big problem in Ladakh is communications, particularly roads, and more especially the supply route into Ladakh on which it depends. This route begins at Pathankot in the Punjab and has two stages: from Pathankot to Srinagar, some 250 miles, and thence onwards another 270 miles to Leh. (For a description of the first stage of the route over the Banihal Pass into Kashmir, see GSA/NMA-1 of July 1964.) Both stages of the route pass through extremely difficult terrain; both

are closed by snow nearly half the year; both are liable to be blocked by landslides at other times of the year; and the Pathankot-Srinagar stage, the part that I've seen, is probably vulnerable to blocking by landslides started by aerial bombing. But most important of all, both stages of the route are exposed to attack by Pakistan. For the first 70 miles out of Pathankot the road closely parallels the Pakistan frontier before it turns into the hills at Jammu. In the second stage, in the Kargil area, the road is actually overlooked by Pakistan-controlled territory. The danger of this situation has been demonstrated during the past six months. Pakistan, according to reports, has attempted sabotage in the Kargil area and succeeded in blowing up a bridge. There have also been infantry attacks across the cease-fire line on Indian posts. In May the Pakistanis shelled the Srinagar-Leh road, apparently to demonstrate their ability to close it. The army couldn't risk this, for when the road opened in early June thousand-truck convoys of supplies would begin grinding over it with the next winter's supplies. So it attacked and captured three Pakistani posts threatening the road and only relinquished them this month when the United Nations agreed to station observers in the area to keep the Paks in hand. The flanking of this vital route by Pakistan is a serious problem for India, considering the climate of its relations with Pakistan, but with Pakistan and China both threatening the country, either in collusion or by coincidence, the danger is made very much greater. India might have to defend its main fronts against Chinese attack and at the same time protect its rearward supply lines from being cut by the Pakistanis. (This danger exists also in eastern India where the lines of communication to the Northeast Frontier and to the entire state of Assam pass through a narrow strip of Bengal between Nepal and East Pakistan.) To defend these vulnerable areas, the army has had to disperse its forces and therefore cannot face the Chinese in full strength.



Blending into the Landscape:

A formation command post of rocks  
and sandbags in a deep ravine.



AN ARCHERY TOURNAMENT.

The exposure of the road to Kashmir in the Jammu area and also of the road to NEFA and Assam to Pakistan attack is a result of Partition in 1947. It represents a bewildering lapse of strategic awareness by the British or the Indians or both. Even more amazing, Partition deprived India of an all-weather road link even with Srinagar. The only main routes from India to Jammu and the Vale of Kashmir passed through Pakistan. The Pathankot-Jammu road had no bridges over three main rivers and thus could not be used several months in the year.

The flanking of the road in the Kargil area is a result of the Pakistan invasion of Kashmir in 1947. Finding that the attack on Srinagar and the Vale of Kashmir had failed and that Indian resistance throughout central and western Kashmir was stiffening, the Pakistanis in the late autumn of 1947 and the winter of 1948 moved eastwards from their bases near Gilgit down the Indus Valley. They bypassed Skardu (to take it later) and took Kargil in April. Then they marched on Leh and sent troops to the Zoji La. The Indians saved Leh by pioneering an air



In the same village as the archery tournament, the old and the new: a man with arrows and a young member of the Ladakhi Scouts.

route there and flying in Gurkha troops, who repulsed the Pakistan attacks of July 1948. Later in the summer the Gurkhas were reinforced and received heavy supplies via the difficult caravan track from Manali through the Rohtang and Bara Lacha Passes. The route to Leh from Srinagar had been cut for several months. Clearly something had to be done. General K.S. Thimayya--later to become famous with the U.N. in Korea and presently U.N. Commander in Cyprus--did it. He drove the Pakistanis from the Zoji La. Then, in a great feat of determination and daring, he brought tanks over the pass, making an initial bit of road and driving them over snowfields and through boulder-lined river beds until he had cleared the road down the Dras valley, and, late in November 1948, recaptured Kargil. In those days it was possible to drive--and push--a jeep from Srinagar to Kargil in good weather, although there was hardly a 'motorable' road. From Kargil to Leh only the caravan route over the Fotu La existed, but it was a better route than that from Manali. So with the Dras Valley and Kargil in Indian hands, the route to Ladakh was open. Judging by

ordinary maps, the best way from Kargil to Leh is to join the Indus at Marol and follow it up to Leh, thus avoiding the 13,000-foot Fotu La. Deep, narrow gorges just above Marol prevent this being a motor road, however, and even the old track avoided them. It was for this reason, evidently, that Thimayya didn't take Marol, which Pakistan now holds. By taking Kargil he had opened the route to Ladakh. After the Kashmir situation had settled down, the Indian government began building a road from Srinagar to Kargil. In the early 1950's it would take a  $\frac{3}{4}$ -ton truck. But the route onwards from Kargil to Leh still received little attention. Only in 1960 did this become a ' $\frac{3}{4}$ -ton road', and only in 1962, two years after the Chinese attacks of 1960, could heavy trucks drive all the way from Srinagar to Leh. The road was made the responsibility of the Border Roads Directorate in 1960, and since then work has gone ahead rapidly. Now, considering the terrain they go through, the roads are excellent.

The tenuous quality of the road link with Ladakh--which the recent attacks by Pakistan have reemphasized--has resulted in the build-up of air transport to Leh and forward points in Ladakh. Winter and summer, whenever the weather permits, cargo planes lift tons of supplies from the Punjab plains over the Himalayas to Leh. C-119's fly from Pathankot; Antonov (AN) 12's fly from Chandigarh. The C-119's are battered craft, 24 of which the Indians got from the United States as military assistance and the rest they bought. Their carrying capacity at the altitudes of the Leh run is limited and a jet engine has been mounted on top of the fuselages of some of the planes to supplement their two piston engines. The C-119's are also handicapped by a low ceiling. To fly into Leh they must wind through the mountains following the valleys and crossing the passes. This makes them subject to weather; if the mountains are clouded in, they don't fly. A portion of the winter and even more time from June to October during the monsoon is thus lost. The Russian AN-12's--which the Indians bought from the Russians on favorable terms in 1962 and which are much like the American C-130--don't have these troubles. A large, four-engined craft, they carry double the tonnage of a C-119 and fly above the weather. It is often clear above Leh and flying weather at Chandigarh when the route through the mountains is closed. Able to fly at 27,000 to 30,000 feet, the AN-12's can avoid the bad weather in the middle and use the good weather at either end. Although the army speaks well of the AN-12's, many officers I met would prefer to have American C-130's. Among other advantages, the American plane has a fully pressurized cabin and a lower landing speed--a help at Leh where the runway isn't lengthy and there are mountains that discourage overshooting. The airlift is spectacular and in an emergency could be of crucial importance--it was in 1962, when American planes and crews helped out. But according to my rough calculations at least five times more tonnage can be trucked in during a month than can be flown in, given the number of trucks and planes presently available. The Government of India, therefore, must keep the road open at any cost, and the events of May and June indicate that it intends to do so.

From Leh outward toward the forward posts, the supply situation is much different and to some extent easier. Ladakh, being snow-free



except on the peaks, most roads are usable throughout the year. We were told that loaded trucks could reach nearly all the base units. Up the Shyok River toward Daulat Beg Oldi there are no roads, however, and the pickets march in and are supplied by pack trains. In this area and in some others, pickets may be cut off for three or four months during the winter, although they can be reached by light helicopters. There are also air-dropping zones in many of the valleys, and there are airfields at Chushul, Fukche, Thoise, Daulat Beg Oldi, and Kargil. Load-carrying helicopters have not been successful in Ladakh and the large helicopters given by the Russians several years ago are no longer there, according to one officer. Voice communication in Ladakh is by land line and radio telephone. The army has its own network of both types. The civil administration can use the army system when necessary--as it must to talk with eastern areas like Chushul and northward in the Nubra and Shyok valleys. But it has its own radio telephone links with Padam in Zaskar and with Kargil.

The military situation along the 400-mile front where the Indian and Chinese armies face each other is now quiet, we were told, and it has been for some time. The Chinese exerted no pressure when the Indians were engaged with the Pakistanis in the Rann of Kutch. (The skirmishes near Kargil were also a separate issue, so far as the Ladakh command structure goes, because the security of this area is the responsibility of army headquarters in Kashmir and not of the General Officer Commanding in Leh.) The positions held by the Indian forces are not a subject that officers in Ladakh were willing to discuss, although the location of most of the forward Indian pickets must not be a secret to the Chinese. Apparently the lines of control of the two armies are about what they were at the end of 1962 after the heavy and successful Chinese



Vertical Desert, Leh.

The rotten rock of Ladakh sometimes produces scree and sand slopes nearly as high as the mountains themselves. INCWA explorer in foreground.

attacks of that autumn. This puts the Chinese army close to the line the Chinese Government was claiming as its own in 1960 (See Map II in GSA-23). The Indians have not placed themselves with the idea of facing the Chinese rifle for rifle and post for post. In fact neither side seems to occupy a 'line' in the sense of trenches or linked fortifications. Both hold positions they consider defensible against enemy attack, and in an area where only certain routes are militarily feasible, this means that posts are spotted about, often far apart, according to terrain. As a result, there is an un-militarized area between the two fronts. In this area, scouts, like the Ladakh Scouts (once a Kashmir Government formation, but now part of the army), do patrolling and keep an eye on the Chinese. Other intelligence is brought in by more irregular channels. As the territory between the fronts is Indian territory (as is the land the Chinese hold), civil administration and civil police function in it, even though it is forward of the major army positions. The Indo-Tibetan Border Police are responsible for border control, including the "ingress and egress of foreigners", as one official put it. There being few foreigners in the area excepting the Chinese, and as few Ladakhis cross into Chinese-held territory these days, I can picture a border policeman asking a few thousand ingressing Chinese soldiers for their identification papers. I presume that the border police act as quasi-military scouts as much as anything else.

The Indo-Tibetan Border Police are a central government force so far as recruitment and command are concerned. The administration of the force, rations, pay, and so on, is the responsibility of the Jammu and Kashmir state government. The central government is now planning to integrate all such units in all border areas into a single border security force under the authority of the Home Ministry in Delhi.

Present Indian tactics are based, so it seems to me as a non-military man, on their experiences in 1962. At that time the Chinese were continuing their policy of the previous eight years, nibbling away at Indian territory without any fuss by moving ahead, placing a new post here and then there, gradually bringing more territory under their control. To counter this, the Indians had been moving their posts forward, too, trying to force the Chinese back by threatening their communications, etc. The positions of the two armies zig-zagged among each other like the pieces in a chess game. Neither side apparently expected the other to use strong force to dislodge it. When the Chinese found that they couldn't drive out the Indian posts with threats and that these posts were becoming a threat to their position in the disputed areas, they attacked in force. It was in mid-October 1962. The Indians were not prepared for an attack. They found that they could not hold posts so far forward of their main positions, and that they lacked the arms and men to hold even reserve positions. They were defeated at Daulat Beg Oldi, in the Chip Chap River area, in the Galwan Valley near where it joins the Shyok, at Phobrang above the western tip of Pangong Lake, and at Demchok, much farther up the Indus. As a Government press backgrounder puts it: The Chinese "attacked in large numbers with an overwhelming majority of troops and fire power and succeeded in over-running all our positions in a single day's battle."



The spirit of Ladakh: prayer flags  
and peaks up the Indus Valley.

What appear to be grassy slopes leading toward  
the snow, aren't; they're gravel and rock.

In mid-November the Chinese mounted a large-scale attack on Chushul, but the Indians had had time to prepare, including bringing up tanks. For three days the Indians held on and finally the Chinese withdrew and declared a unilateral ceasefire. Somewhat later the Chinese withdrew from some of the positions that had caused the Indians to vacate, having taught the Indians a lesson, and today Daulat Beg Oldi, Phobrang, and Demchok are again under Indian control. Indian troops no longer hold positions that can be so easily overrun. Scouts, police, army patrols,

and other intelligence gatherers watch and probe the Chinese positions. The army puts its faith in positions that can be quickly reached by reinforcements and that can be supported by heavy weapons. Commanders in Ladakh had no doubt that they could hold the present positions against the Chinese, whose forces, the Government claims, are even stronger now than they were in the autumn of 1962.

The Chinese continue to hold some 14,000 square miles of Ladakh that India claims--seemingly on sound evidence--as its own. There are many reasons to believe that the Chinese will continue to keep this territory indefinitely. From their point of view, this area and the roads across it connecting Sinkiang with Tibet are vital to their interests. So far as India is concerned, a war with the Chinese would be costly and India has enough financial troubles as it is. An attack on the Chinese in Ladakh, where many observers consider the Indians stronger and better placed than the Chinese, might by itself be successful--excepting that to hold the Aksai Chin, if it were recaptured, would be difficult. But if the Indians tried to regain the lost portions of Ladakh, the Chinese might counter attack on the Northeast Frontier, where many observers believe that the Chinese have the tactical advantage. India dare not risk losing the Brahmaputra Valley and possibly Assam to regain Ladakh. In any case India might find itself fighting the Chinese on two fronts, a dangerous proposition. And if Pakistan decided to enter the conflict, India might find itself in a mortal predicament. It appears, therefore, that unless the Chinese renew hostilities, India will continue to follow its present defensive strategy in Ladakh and, for that matter, all along its northern frontier.

Yours sincerely,

A handwritten signature in cursive script that reads "Red Austin".

Granville S. Austin