

The Ulugh Muztagh

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FOR ME THE LONG quest began in 1966 on the slopes of Mount Russell in the Alaska Range, where I shared a two-man tent with Eric Shipton. Adams Carter had invited me to join him on an expedition and now we were sheltering from a week-long storm that drove in from the coast. Finally, we looked at each other and yawned.

“Eric,” I said, “if you were doing everything all over again, what would you change?”

“Well, I certainly wouldn’t spend six years trying to climb Mount Everest. That’s too long for any mountain.”

“What would you have done instead?”

“Somehow I would have got to the Ulugh Muztagh.”

“The Ulugh Muztagh? What’s that?”

“It’s a big mountain in Central Asia—nobody knows how high—reached in the 1890s by an Englishman who surveyed it as being well over 25,000 feet. It’s probably the hardest place in the world to get to, harder than the Antarctic, because the land around it is so high and nobody lives near it. Bill Tilman and I had hoped to get there but it is too far in.”

That was all I knew about the mountain for years, but in 1973 I found that Nick Clinch had also talked to Eric. In no time, Nick and I decided to become partners in a quest: to get to the mountain, find its height and climb it—and together we began to push ahead. First Betsy Clinch, Nick’s wife, found an article by an Englishman, St. George Littledale, in an 1896 issue of the *Geographical Journal* of the Royal Geographical Society. Littledale, his wife, his terrier and his nephew (“of Oxford University boating renown”) in 1895 had passed the Ulugh Muztagh and surveyed it while attempting to reach Lhasa from the north. The article had a map showing his route from the Southern Silk Road into Tibet, and told how after three weeks on horseback they had reached the “Great Ice Mountain” (Ulugh Muztagh in Turki). Our next success was securing publicly available satellite photos of the mountain, showing great glaciers flowing out from it, but what we could not secure was permission from the Chinese to let us go there. In the days before ping-pong diplomacy we even tried to get permission for a joint China-Pakistan-U.S.A. expedition, under Pakistan leadership, but the Chinese turned that down too.

In February, 1979 in Beijing, I again applied, this time in person to Mr. Shi Zhan Zhun of the Chinese Mountaineering Association, but learned that “the

PLATE 12

Photo by Peter Molnar

**Last camp before reaching Base
Camp. Ulugh Muztagh's highest sum-
mit is the one on the left.**



area is not yet open to foreigners"; and annually thereafter we continued to apply until late January, 1985 when we learned that our mountain had suddenly been made available to somebody else. At this, Nick Clinch rose from a sick bed, flew to Beijing and discussed our previous negotiations. To our delight the Chinese agreed that the permission should be ours, but the agreement was not finally signed until May 30, and that only after Nick had made two more visits to China.

During the three months that followed, Nick Clinch, an old pro at organizing expeditions, showed his usual skill. By September 11, when the eight members of the expedition left by air from San Francisco, we were what we called a "geriatric expedition." I had told Nick I was by now too old to be any use, but he insisted on my going. The real climbers, in addition to Nick, starting with the oldest, were Pete Schoening (in charge of equipment), Tom Hornbein (also our doctor), Jeff Foott and Dennis Hennek. Peter Molnar and Clark Burchfiel, distinguished geologists from M.I.T., both with wide experience in China and Tibet, completed the party. The Chinese were supposed to have twelve climbers, but by the time we had flown to Beijing and on to Urumchi (Woolamoochi) the number had grown to 16, with 27 support personnel, including 12 drivers, a cook, 4 geologists, a doctor, a radioman, photographers, reporters, and so forth. This joint mountaineering expedition was to be the first the Chinese shared with Americans. (They had had only one previous joint expedition, one with the Japanese a few months before.) Also, as our Chinese hosts kept telling us, we were the first foreigners to be allowed into the southern part of the Xinjiang since Chinese Turkestan became part of the People's Republic 30 years ago. Celebration of that event explained the size of our Chinese team, for ascent of the Ulugh Muztagh was to be a major part of the celebration activities. Chinese climbers are all paid professionals, and naturally success on the mountain was to be of the greatest professional importance to our partners.

Burchfiel and Molnar were already in China when the other six of us took off from San Francisco on September 11. We had 87 bags or boxes with us, including identical personal equipment items for eight Americans and twelve Chinese. In Beijing we were warmly greeted by old friends of the Chinese Mountaineering Association, who gave us a splendid banquet. It was here that we met Governor Tehmer of the Xinjiang; Lu Ming, head of the All China Sports Federation of the Xinjiang and our expedition's overall leader (though she would not go to the mountain); and Wang Zheng Hua, in charge of transportation to and from the mountain, and of all Chinese on the mountain. He had led the recent attempt on Namcha Barwa.

In Urumchi, which we reached by air, we were generously welcomed again. It was here that we agreed on the purposes of the expedition: to climb the mountain, find its height, and whether or not it is a volcano. If it were, it would be the world's highest. At Urumchi too, we checked the condition of our survey instruments. These consisted of a satellite surveyor (a computer that uses the Doppler effect to establish latitude, longitude and altitude), a Uniranger electronic distance measuring device (borrowed from Bradford Washburn of the Boston Museum of Science), a 7-crystal cluster to use with it (loaned by Cubic

PLATE 13

Photo by Dennis Hennek

**Wang Zheng Hua, the Chinese leader
in the field, addresses the joint expedition
at Lake Acchikul.**



Precision), and a Kern T-2 theodolite and tripod loaned by the Thompson School, University of New Hampshire. All were in good shape, but when we opened the box whose bill of lading declared it held the antenna for the satellite surveyor, we found only spare parts. Someone had goofed. We were to leave at dawn two days later on our 1,100-mile safari to the mountain. We were shocked. It looked as if it would now be impossible to find the height of our mountain, a major responsibility of the expedition.

I won't go into detail about what happened, but some brilliant work on the part of someone in the company, and by the Chinese Mountaineering Association in Beijing and Urumchi, ended with a jeep chasing us, three men taking turns driving night and day, and catching us near the point where they could no longer follow.

The 1100-mile drive to the mountain in seven huge army trucks, three land-rovers and two jeeps was in many ways the most interesting part of the expedition, but hard travelling. It took ten days, including two days off to work on the vehicles. At Korla, where we expected to find a small town, we instead found a city of 120,000, with ten hospitals, a tire factory, a washing machine factory, and so on. Beyond it a yellow brick road led us to Ro-jeng, formerly Charklik, where Marco Polo had stopped many centuries ago and Sven Hedin had wintered at the turn of the last century. From here we continued along the north side of the Altyn Tagh Range, finally crossing it on a beautifully engineered road. We also crossed the great Altyn Tagh fault before reaching a big asbestos mine, our jumping-off point. Now we headed out across the roadless desert, finding hard going for the trucks. After a night in a game warden's house, the last habitation, we pushed on to Acchikul Lake, 40 miles long, where we saw brown-headed seagulls, Orongo antelope, wild asses, a number of yaks, bears, a wolf and a fox. On the second of October, long after the first view of our handsome peak, we crossed an arid valley, forced our way up a canyon and set up our Base Camp tents on the east side of the mountain at what we later learned was over 17,400 feet. Burchfiel and Molnar learned that the Ulugh Muztagh strictly speaking is not a volcano, though it is a result of volcanic processes.*

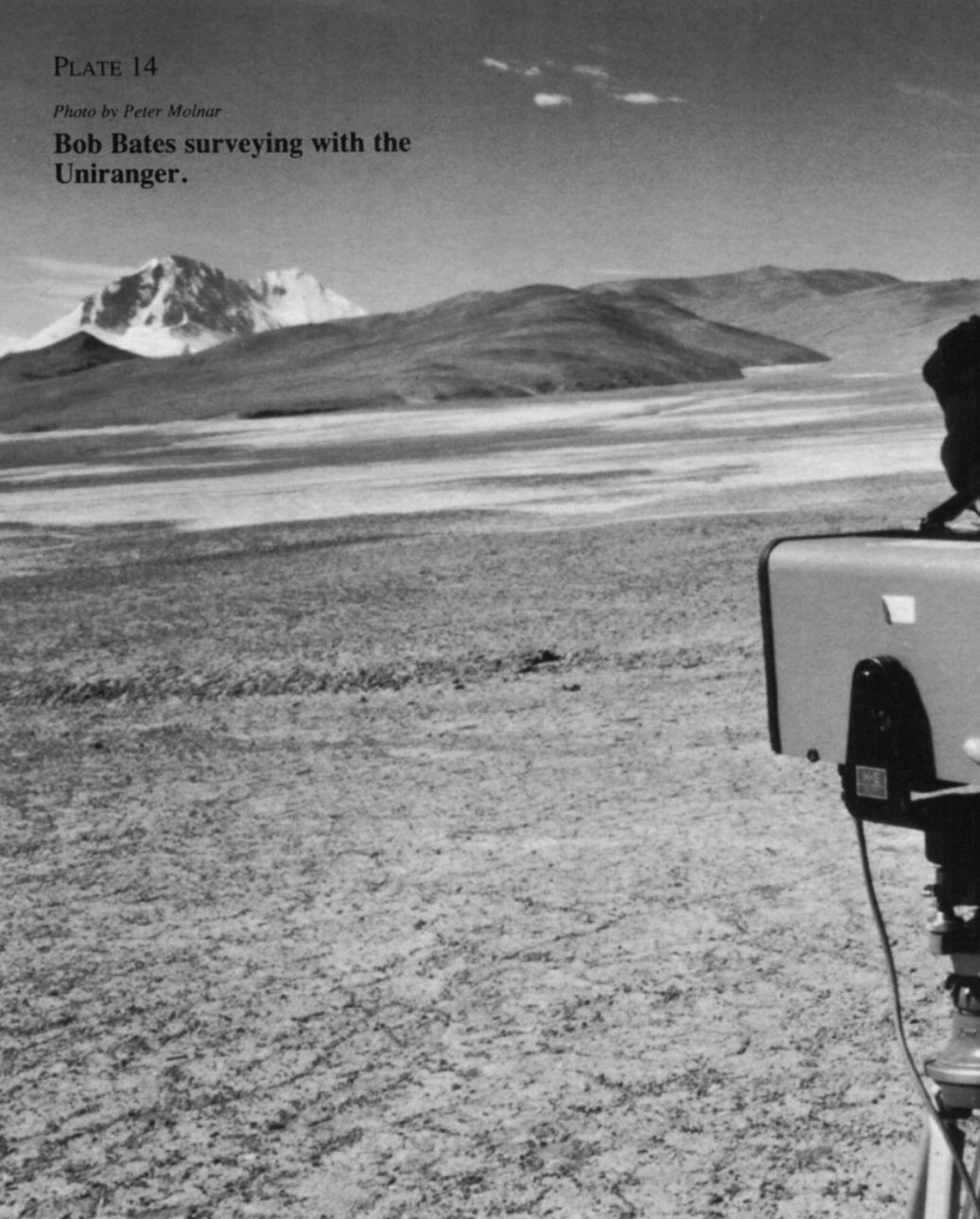
Our plan at Urumchi had been to hold a sort of short training camp at Base, testing one another's skills, learning to work together despite language difficulties and becoming acclimatized, but Wang Zheng Hua was anxious to get to work on the mountain. After a flag raising ceremony involving the entire group, with Pete Schoening carrying the American flag, three Chinese went off to reconnoiter. The Chinese had been on the mountain for the first time a year before, when they had made a brief attempt to climb it. Accordingly we followed their choice of route, though a more thorough reconnaissance would have improved it. Soon all climbers began packing to Camp I, with every man responsible for carrying his sleeping bag, personal gear and a good load of

* The intrusion of magma near the surface hardened the surrounding rock so that it became more resistant to erosion than rock farther away. Igneous rock is exposed at the base of the mountain.

PLATE 14

Photo by Peter Molnar

**Bob Bates surveying with the
Uniranger.**





expedition equipment, for there were no porters. At age 74, I was no longer good at load carrying and I determined to focus entirely on the survey and try to be useful at Base Camp thereafter.

By October 9 Camp I was well established at the snout of a glacier, reached by a climb over a rounded foothill and a descent of several hundred feet; and shortly afterward loads began to be cached five or six miles up the glacier at what was to be Camp II. Peter Molnar and Clark Burchfiel now showed the advantage of their acclimatization, built up during the past summer's geological expedition. They began to help the other load carriers. Hennek, Foott and Tom Hornbein were carrying big loads but Pete Schoening was getting over some sort of flu (which Nick caught later) and Nick is slow to acclimatize. Tom, as our climbing leader, was also working out routes and the logistics of where food and equipment would be needed, and how much.

Meanwhile our survey was moving along. All equipment had survived the rough bouncing around, and the Doppler Satellite Surveyor had by now been moved to a site on the great outwash plain below our canyon and left running. From there, despite a furious wind, Molnar, Burchfiel, Schoening and I completed our theodolite work. Peter Molnar's final computations from observations at three points on our seven-mile baseline, allowing for curvature of the earth and the difference between geoid height and sea level height, gave us at a much later date a final figure of 6,987 meters \pm 10 meters for the higher peak—roughly a disappointing 23,000 feet.

On the 12th, Pete Schoening felt better and left Base Camp for Camp I. From then on he and Tom Hornbein spearheaded the route above Camp II, which by now had been occupied. Next day Nick Clinch returned to Base Camp with a bad cold that had settled in his chest and seemed more like pneumonia. He was utterly exhausted when he arrived and looked very ill. On the 13th Tom, Pete Schoening and Clark Burchfiel began putting in ice screws to fix the route to Camp III, but the wind was very bad. Weather continued bad with some snow on the 14th and wind and cloud on the 15th, but Pete and Tom moved higher and established a cache at 6,200 meters. At Camp II the next morning there was nearly a meter depth of blown snow and no possibility of climbing. On the 17th several Chinese and Jeff and Dennis returned to Base to conserve food packed to Camp II. They told of big drifts at II and development of potential windslab danger. We woke to light snow on the 18th, but the weather cleared and Foott, Hennek and several Chinese took loads to Camp II.

All of us by now were worrying about whether the mountain would be climbed in the time left to us. On the morning of the 19th I went with Zhou Zheng and the Chinese geologists to see where two continents had met long, long ago. We saw a mass of serpentine rock that had been sea bottom at the time Gondwanaland had pushed into southern Asia millions of years ago and formed India. The sea bottom had been thrust northward over the region of the Himalayas and even over the Kun Lun to reach its present position. On our return, to our great surprise, Foott and Hennek appeared at Base Camp. They were to have been our summit team, but a major misunderstanding had developed about the



PLATE 15

Photo by Peter Molnar

Camp II on ULUGH MUZTAGH.
The route ascended the ice slope and
then the ridge to the summit.

number of Chinese climbers they could safely lead to Camp III and higher. Original plans had been changed. At this point Foott and Hennek came down to Base. Nick, now feeling stronger, pushed back up to Camp II the same day, and Tom Hornbein and Pete Schoening came down to II to try to sort out the confusion. This put them out of position for an immediate summit climb. Tom had been pushing himself very hard and was not feeling well, and so after a discussion at II he continued on down to Base Camp to recuperate. Next day, October 20, the weather was perfect and so the Chinese at Camp III moved up to Camp IV within easy striking distance of the summit. Since bad weather was still likely any day and we had such a short time left, we urged Wang Zeng Hua to tell his man at IV not to wait for Pete Schoening, who was returning to III with Burchfiel and Molnar, intending to go for the summit on the 22nd. The night of the 20th-21st two Chinese photographers lost the route near Camp IV, and were not found and brought in—too cold to speak—until three A.M. The members of the assault party were searchers, and the effort took a good deal out of them. They did not leave Camp IV until after lunch and did not reach the summit until 7:28. When they radioed the good news to Base Camp there was pandemonium, but we were all concerned about their getting down. They were Hu Fengling, Zhang Baohua, Ardaxi, Mamuti and Wu Qiangxing.

Pete Schoening and his companions at Camp III did not get the news that evening. They went to bed early, planning an early start so as to climb the peak and return the same day. When they waked at dawn on a clear, cold morning, however, they saw that there had been an accident. A figure was lying unmoving on a snowfield far below, while another, who seemed hurt too, was trying to pull him. That changed everything. You can't go for a summit when injured men you can help may be dying. They went down.

They reached the injured men at about the same time Nick Clinch did, for three members of the five who climbed the mountain had arrived in Camp II late the night before, but two were missing, and he had gone out to look for them. All had come down by a different route from the one they had used to go up—and after sunset! Both injured climbers had had a 500-meter fall. One of them, Hu, looked so badly hurt that Clinch and Schoening thought he might not live until they reached Camp II, but later it was determined that despite multiple bruises his worst injury was having badly frozen feet. His companion was badly bruised too, but somewhat better. Hu's friend Guo, our interpreter, had reached Hu before anyone else, and soon four Chinese and four Americans combined efforts and were able to get the injured ones across the ice and up to Camp II.

There was now no chance for a second climb of the mountain and the following morning (the 23rd) everyone on the mountain began moving to Base. Hu had to be carried, a process painful for him and for his carriers, while his companion and a third Chinese who had also had a fall were able to limp down on their own. It took a long time to get everyone down. Some arrived after midnight and Hu and his carriers did not get in until nearly seven on the morning of the 24th. Dennis Hennek and Tom Hornbein did marvelous work caring for them as they came in. Our interpreter at this point was so moved by the care the Americans



PLATE 16

Photos by Jeff Foott

Dancing girls lead the returning expedition to a banquet in Ro-jeng.



PLATE 17

Korla welcomes the expedition.

were taking of the Chinese that he remarked, "Americans must be the kindest people in the world."

On the 24th there was a great sorting and breaking camp, and next day after the Base Camp area was in large measure policed the long journey back began. It was far colder than when we had arrived, we were low on food and everyone was eager to get back. We drove straight to Acchikul Lake, stopping only to pick up a fuel cache, but stayed only long enough to gulp some quick-cooking noodles. It was dark now, but we all wanted to go on. Tom Hornbein and I, who rode in truck number six, will never forget that bumpy drive across the endless, snow-covered, deserted land, shining in the moonlight. Siberia can not be more desolate. At dawn we stopped for an hour or more at the warden's cabin, then continued our hard driving to Mangyai Chen, which we reached 27 hours after leaving Base Camp. We were here a day, then drove on to Ro-jeng, where eight pretty dancing girls cavorted ahead of us as we marched two or three hundred yards through streets lined with people. Banners crossed the street exhorting people to "follow the example of the joint (sic) expedition." If they followed our example at the huge banquet that followed, the price of melons, pear-apples and all sorts of their delicacies must have soared, for we were very hungry. That day we continued on to Army Camp 34, where we were welcomed by another delicious banquet, which ended at one o'clock in the morning. Then on again towards Korla. Some 20 or 30 kilometers before we reached the city we found Lu Ming, the marvelous Chinese woman who was the joint leader, waiting for us. She hugged us all, with tears running down her cheeks, saying again and again, "Oh, I was so worried about you." She told us of a celebration in Korla and she was right. Welcoming banners flew across the street and several thousand people lined the sides. Flashbulbs popped, firecrackers went rat-a-tat, big drums boomed, school children squealed, hollered or tootled horns, and pretty girls came up to pin rosettes on us and give us big bunches of artificial flowers. Heady stuff.

Then there was a further welcome at Urumchi, with Governor Tehmer, and the Party Secretary and others standing in the snow to greet us. Two days later came the big celebration. We put on the black suits and knitted red ties especially made for a magnificent victory banquet in the newly built Great Hall of the People. A whole roast sheep was wheeled in as a special expression of friendship, and Chinese and Americans ate, drank and danced together with a warmth and enthusiasm none of us will ever forget.

A few days later, after warm send-offs in Urumchi and Beijing, and still wearing our hats from Korla, we were on the way home. Long before our arrival, however, there had been a moment when Nick and I looked at each other, raised a glass and murmured, "To ERIC SHIPTON."

Measurement of the Altitude of Ulugh Muztagh

The altitude and position of the Ulugh Muztagh were much easier to determine in 1985 than they were in 1895 because of the extraordinary array of new

surveying equipment that has been developed in recent years. The Magnavox Company leased the party its latest position-finding Geociever, the University of New Hampshire loaned one of its light but precise Kern T-2 theodolites, and Boston's Museum of Science loaned its Keuffel & Esser Uniranger electronic distance-measuring instrument.

Bob Bates, who was in charge of these observations, working closely with Bradford Washburn, made detailed surveying plans long in advance of the actual expedition, knowing with certainty that the peak was surrounded with a treeless desert which would make intervisibility of many survey stations extremely simple. Also the high desert atmosphere seemed to assure virtually perfect visibility (given good weather, which was rarely the case!).

Because the peak was too far from Base Camp to make a single direct electronic distance-measurement from there to its summit, it was planned to have three valley-survey-stations, arranged so as to have a precise baseline almost twice as long as the Uniranger's 5-mile limit. The summit of the peak was also definite enough so that it could be clearly identified from all three stations without the need for installing a target on top—extremely lucky in view of the problems later encountered by the climbers who actually got there.

Using the theodolite and the Uniranger, a basic triangle was established with all three points intervisible and with both of the summits of the Ulugh Muztagh also visible from all three. The composite baseline was 10,460 meters (6.5 miles) long, giving excellent strength to this little survey network. The distances to the summit from these stations were 22, 18 and 14 km. (13.6, 11.2 and 8.7 miles).

The Magnavox Geociever was used to determine the geographical location of this base network, observing Doppler signals resulting from scores of passes by five navigation satellites. Unremitting cold, wind and cloudiness, as well as the 18,000-foot altitude, made this otherwise relatively simple work both miserable and difficult.

The results of the Doppler observations were computed for the expedition by the Defense Mapping Agency in Washington and the triangulation network computed and balanced by Prof. Peter Molnar.

This field work determined the altitude of the highest peak of Ulugh Muztagh to be 6987 meters (22,923 feet) with an estimated possible error of ± 6 to 10 meters. This is compared with the Chinese determination of the peak's altitude to be 6970 meters (22,867 feet)—and Littledale's 1895 estimate of 7723 meters (25,338 feet). The geographical coordinates of the Base Camp are now considered to be North Latitude: $36^{\circ} 25' 09.235''$ /East Longitude $87^{\circ} 29' 47.264''$.

Although the long-fabled Ulugh Muztagh did not turn out to be nearly as high as everyone had hoped it would be, it is still indeed a fascinating mountain massif in the midst of some of the world's most exciting geology.

A detailed account of these observations may be found in the full report of the expedition which is on file at the Library of the American Alpine Club in New York City.