The Northern Tibetan Plateau

Ulung Muztagh: The Highest Peak on the Northern Tibetan Plateau
We saw similar effects in the Pacific Ocean, where the current was entering and leaving the basin, interacting with the surrounding water masses. In the Northern Hemisphere, the water current moves counterclockwise, while in the Southern Hemisphere, it moves clockwise. This interaction creates a strong upwelling of cool, nutrient-rich water, which supports a rich marine ecosystem.

However, in the Southern Hemisphere, the water current moves in the opposite direction, creating a strong cooling effect on the surrounding areas. This is evident in the presence of icebergs and the cold climate of Antarctica.

Moreover, the currents in the Southern Hemisphere are also influenced by the Coriolis effect, which causes the water currents to deflect to the right. This effect is weaker in the Northern Hemisphere due to the smaller size of the ocean basin.

In conclusion, the Southern Hemisphere currents are more complex and challenging to study due to the smaller size of the ocean basin and the strong influence of the Coriolis effect. However, these currents play a crucial role in shaping the climate and ecosystems of the Southern Hemisphere.
ranges. The whole of the northern edge of the Tibetan plateau, approximately 100km in width, is being compressed, with each roughly easterly-trending range being overthrust on to its adjacent valley or basin.

This tantalizing evidence for active compression both ignited our curiosity and fuelled our frustration, for we had signed a scientific protocol that permitted us to go no more than 100 metres from the road. Since, in fact, there was no road south of the Akato Tagh for nearly 500km to Ulugh Muztagh, we struggled for new definitions of ‘the road’ and for excuses that might bring our jeeps and trucks closer to the rocks. These struggles were of no avail, however, because transporting our party, 54 people in all, to Base Camp was a heavy responsibility for the Chinese leadership, and subtleties of the sort we imagined seemed to them nuisances rather than sensible requests.

The seemingly easy business of driving overhead across relatively gentle terrain, for which good maps exist, offered unexpected frustrations. On two consecutive days, one jeep and one truck departed early. Two members of our party, Jeff Foorott, known for several first ascents of difficult rock climbs in the US and New Zealand, and especially as a wildlife photographer, and Dennis Hennek, also an excellent photographer but better known for technical climbing (El Capitan, Trango Tower, Baffin Island, Gaurisankar, etc.), hoped to see and to photograph wildlife before the rest of our caravan disturbed the animals.

In addition, our camp management wished to set up the next camp and to have dinner prepared when the rest of us arrived. Neither plan was accomplished. On the first day these two lead vehicles got stuck in the sand and had to wait until others arrived and pulled them out. On the second day they deviated from the route and drove two hours until stopped by a cul-de-sac. While catching up with the rest of us, the truck again became stuck, and eventually was abandoned so that we could all sleep together at the planned camp-site near the lake, Achik Kol. Unfortunately not only all of the cooking gear but all of our sleeping bags and personal belongings were stuck with that truck.

While waiting for our midnight dinner, we joked about making mountaineering’s most ignominious bivouac. Nick Clinch, who claims that he once held briefly the world record for the highest incineration of an (initially) occupied tent, prepared the rest of us for a long sleep sitting bolt-upright in the jeep. Only two of us had sleeping bags. These two tried in vain to persuade the rest of us that we needed the bags more than they did, while the other six of us preferred to shiver rather than to bear the guilt of sleeping well while others did not. Eventually our ignominy was averted when our gear arrived, but not before Dennis Hennek discovered and helped himself to one of the 12 new sleeping bags brought from the US for the Chinese climbers, who now numbered 16 and had no formula for dividing this and other gear among them.

That night, 30 September 1985, we should have realized that October was late in the season, for Pete Schoening donned his long underwear. It was Schoening who bailed six others after a tumultuous fall in a storm on K2 in 1953, and who, with Andy Kauffman, became one of the only two Americans to make a first ascent of an 8000 metre peak, Gasherbrum 1, in 1958. Schoening had stayed active, climbing McKinley three times and Pik Kommunizma in the Pamir, but never had he required the aid of long underwear. Our record for ignominy might have made a good joke in retrospect, but, without sleeping bags, our night at only 4300 metres would have been a cold one.

The disorderly arrival at Achik Kol assured us a day’s rest for acclimatization. Burchfiel and I took the opportunity to have another look at the folded and faulted terrain through which we had passed the previous day. We had been impressed by sedimentary rock which literally stands on end; it had been so tightly folded that most layers were nearly vertical. Most noteworthy was that the age of this rock is at most 5 or 10 million years, much younger than the age of India’s collision with southern Asia 40 to 50 million years ago. Moreover, unlike areas farther north where active faults are common, we saw no evidence that the folding and faulting are continuing. Thus this part of Tibet had been compressed sometime in the last few million years, since the now-folded sedimentary rocks were deposited. Yet we had seen the faults where compression now occurs farther north, on what is now the northern edge of the plateau. A few million years ago the northern edge of the plateau may have lain near Achik Kol.

We looked forward eagerly to what Ulugh Muztagh would reveal to us of Tibet’s geologic history, and on the next day we got our first glimpse of the peak, from about 80km to its north-east. There was much rejoicing when we reached a low pass and saw it looming over a lower range to its north, and we camped in mid-afternoon at the edge of a wide plain where kyang, or wild asses, roamed in the foreground of our goal. (The choice of this very pretty camp-site was a consequence of another mishap: when the last truck of our caravan dug itself into the mud about 500 metres from our previous camp-site at Achik Kol, a rescue party had to return to collect the contents.) On the next day, we drove south and then west, up wide valleys with braided streams, and then up a rocky stream bed to Base Camp, at an elevation of 5352 (± 5) metres.

To measure the height of Ulugh Muztagh, we brought considerably more modern gear than Littledale could have imagined. One instrument recorded signals from satellites specially launched for navigation. The instruments measured the Doppler shift, the very small change in the frequency of the signals recorded by the receiver depending upon whether, and how rapidly, the satellite approached or receded from the receiver. The variation in the Doppler shift as the satellite moved across the sky, in a path that could be measured accurately, allows the position of the receiver to be determined. It is remarkable that one can, with repeated measurements from different satellites in one day, determine one’s location to within an uncertainty of only a couple of metres.

Perhaps even more extraordinary is that the greatest source of uncertainty lies, not with the positions of the satellites or with the recording of their signals, but with our ignorance of what sea-level would be if one could cut a channel to the coast and let an ocean into northern Tibet. With satellite navigation, one measures the position relative to the centre of the Earth, but heights of mountains are conventionally measured relative to ‘sea-level’, which is hardly level. Waves and tides are only small perturbations to sea-level compared with those due to variations in the densities of rocks in the Earth. For instance, if one sails due east from Tokyo over the very deep trench east of Japan, one moves about 100 metres closer to the centre of the Earth. Calculations suggest that sea-
was a volatole, for when we neutralized their ideas, we gained new enthusiasm for
psychological research. We conducted a detailed study of the Lithium Mitzhary
which revealed a complex network of connections between different brain regions.
When we tested the hypothesis that the Lithium Mitzhary was not involved, we
induced a series of experiments that confirmed our predictions.

The researchers at the laboratory of the Lithium Mitzhary were able to demonstrate
that by manipulating certain parameters, they could control the behavior of
organisms. They found that by increasing the concentration of Lithium Mitzhary,
organisms showed a significant increase in activity. However, when the concentration
was decreased, the organisms returned to their original state.

One particular experiment involved the study of Lithium Mitzhary in the context of
memory. The researchers found that by administered a small dose of Lithium Mitzhary,
organisms exhibited enhanced memory retention. However, when the dose was
increased, the memory retention decreased.

In conclusion, the Lithium Mitzhary plays a crucial role in the regulation of
cellular processes and behavior. Its study continues to be a significant area of
research in contemporary neuroscience.
41. View of Uighur Mountains, looking W in late afternoon from Camp 2 in the foreground.


We had an extended break of nearly two days, during which time we spent some leisure time in town. The days were very pleasant, with a gentle breeze blowing through the valley.

After breakfast, we set out to explore the surrounding area. We climbed a small peak, which offered a great view of the surrounding mountains. The climb was not too difficult, and we were able to reach the summit in good time.

On the way back to camp, we crossed a small stream and found a beautiful waterfall. We decided to take a break and enjoy the scenery.

The afternoon was spent relaxing and enjoying the view. We also had a small picnic and shared some stories.

As the sun began to set, we headed back to camp. We were all tired after the long day, but we were pleased with our progress.

We had a hearty dinner and促进了 a warm discussion about our experiences so far. We were all looking forward to the challenges that lay ahead.

The next day, we planned to make our way to the higher peaks. We were excited about the possibility of making some new discoveries.

In the meantime, we took some time to rest and prepare for the climb. We were all in good spirits, and we were confident that we could accomplish our goal.

We spent the day climbing and exploring, and we were able to reach the summit of the higher peak in good time.

The view from the top was breathtaking, and we were all filled with pride and excitement.

We spent the evening celebrating our achievement, and we shared a special dinner to commemorate the occasion.

The climb was a great success, and we were all eager to continue our exploration of the mountains. We were grateful for our friends and colleagues who had supported and encouraged us along the way.
42 Pete Schoening and Clark Burchfiel resting near an outcrop of the granitic intrusive rocks, just NE of Ulugh Muztagh.

43 Glacier flowing E from Ulugh Muztagh, and rounded dome (6000m) which marks the E edge of the Ulugh Muztagh ice-field.
On 27 October, I hiked with Yung, an American from the summit of the Shanghai expedition, to reach the summit of Mount Everest and to reach the summit of the Chinese Expedition. The weather was clear, and the view from the summit was spectacular.

The view from the summit was breathtaking. The snow-capped peaks of the Himalayas were visible in the distance, and the air was crisp and fresh.

As we stood on the summit, we felt a sense of accomplishment and pride. It was a moment of pure joy and satisfaction.

We took a moment to appreciate the beauty of nature and the achievement of reaching the summit. It was a moment of reflection and gratitude.

We also took a moment to remember the brave climbers who had gone before us and to pay our respects to their memory.

As we sat on the summit, we could see the snow-capped peaks of the other mountains in the distance. It was a moment of awe and wonder.

We also took a moment to take in the beauty of the landscape, and we were struck by the majesty of nature.

As we stood on the summit, we were reminded of the power of human endurance and the beauty of nature. It was a moment of inspiration and motivation.

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The morning was crystal clear. After the snowstorm that night, the valley was thickly covered with fresh snow. The good weather allowed us to continue our ascent, and we set off on our journey to reach the summit. The air was crisp, and we could see for miles. We were finally heading towards the summit, and the weight of our previous efforts had paid off. We were close to achieving our goal. 

As we ascended, we encountered a few challenges. The route was steep, and the snow was deep. We had to be careful to avoid any slips. Despite the difficulties, our spirits were high. We were determined to reach the top, and we didn't give up. 

Finally, we reached the summit, and the view was breathtaking. We could see the entire valley, and the surrounding mountains. It was a moment of pure joy and accomplishment. We had achieved something great, and we were proud of ourselves. 

After a brief rest at the summit, we began our descent. The journey back down was not as challenging, but it was still a test of our endurance. We were determined to make it back to base camp safely. 

Finally, we arrived back at base camp, and we were greeted by our fellow climbers. They were happy to see us and congratulated us on our achievement. We shared stories of our experiences, and we were all filled with a sense of accomplishment.

The next day, we had a celebration. We shared food and drinks, and we talked about our experiences. It was a day of reflection and celebration. We were all proud of what we had accomplished, and we knew that we had achieved something truly remarkable.