## West Face of Mount Brussels

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## NEW LIMESTONE TECHNIQUES

asset on steep limestone walls of the Canadian Rockies. This calmness must be coupled with instant reactions when holds break and shift. The old cliché "I fell because a hold broke," is not valid in this range, for it might need repeating as often as thirty times a pitch. Correct climbing form, maintaining three points of support, is essential on rotten rock. Limestone holds often cannot take any outward pull but frequently can be used by holding the rock in place and exerting pressure downward, sideways and even upward. On exceptionally rotten rock the climber must plan several moves ahead and then go through them in rhythmic sequence to a resting place. As a point of support breaks, he is already using another point, thus climbing faster than the holds are breaking.

To climb steep, rotten limestone the leader must have his iron completely organized. An iron loop of one-inch nylon webbing rests diagonally across his chest and back, nearly touching his belt and containing the carabiners that hold the pitons. He never carries more than two angle or three horizontal pitons on a carabiner. All the gates are "down and out" so that he can quickly unclip a piton. Behind the piton carabiners, the climber carries free carabiners in chains of three with their gates "up and in" so they also can be used quickly. In front of all the iron one free carabiner is kept for ultra-quick use. The climber ascends rhythmically to a resting place which might consist of large holds, a ledge, or even an overhanging crack where he is completely out of balance. In the latter case the climber may reach the crack as his arms start to weaken from the steep lead; obviously organization of his iron is of utmost importance. With one hand he takes the correct piton from the iron loop. (The other hand is needed to hold on.) Long experience is needed to select the right piton on the first try. He must place it with only two, three or four blows. Dropping the hammer, which is tied to him, he grabs the free carabiner in front of the iron loop and clips it into the piton, often just as the exhausted fingers of his other hand are opening. Thus hanging from the carabiner, the climber will clip another carabiner into the first carabiner and take tension on this second carabiner. His hand may take up so much space in the first carabiner that the gate cannot be opened for the rope. This quick direct aid often provides the only resting place even on low angle extremely rotten rock.

About 90% of the pitons placed in this limestone are in expanding cracks. Of the horizontal pitons we used, 60% had tapered blades. In cracks with parallel walls, tapered pitons press only near the surface and widen or destroy the crack. An untapered piton of the right size exerts good pressure far back in the crack. We also used special chrome-moly knife-blade pitons with blades 2, 3, and 4 inches long. About 25% of the pitons were of soft steel made by Simond or Cassin. The remaining ones were made by Chouinard.

Pitons are generally placed in the Canadian Rockies in cracks and behind blocks or flakes. Holes such as are found in the Dolomites are present only occasionally. The exceptionally bad cracks in limestone are either shallow and must be carefully used as they are, lest they be destroyed, or else deep and can be improved. If the crack is shallow, untapered pitons, holding just at their very tip, will often work if placed with care. If the crack is a deep one, the following example from Mount Brussels shows how it may be improved. To protect myself from a possible short fall, I drove a 4-inch knife-blade into the only crack; it went in as if through hot butter. I hit the piton at right angles to the crack and this broke away the outside. After chipping away more rock, I redrove the piton; this broke out the crack again, thus making it deeper. I placed a hero loop (9/16-inch webbing) through the eye and drove the vertical piton completely in with only the loop sticking out. The piton was finally holding in rock 10 inches behind the original surface.

Climbing faces in Canada is safer than usually believed when proper methods are used. Few walls allow really aesthetic lines, straight as an arrow. A climber must study all facets of the problem: the faults, alternatives and retreats. He must also recognize the danger zones. Speed is safety. The fast party places itself in the objective danger zones for a minimum of time. Belays should be under overhangs and to one side of the next lead whenever possible. If the belayer must be directly below, he should have a long tie-in, making it possible to sidestep rockfall. The leader is not allowed the luxury of long falls; rows of pitons would pull out. Belays and rappels are generally done from more than one piton. Not to wear a helmet borders on madness or suicide in the Canadian Rockies.

## THE CLIMB

As if misplaced from the Dolomites, a tower of rock dominates the main chain of the Canadian Rockies. It requires a higher level of technique to reach the summit of Mount Brussels than any other peak in the range. After many attempts by outstanding climbers through the years, the peak was finally ascended by Garner and Lewis in 1948. Even Snowpatch Spire had already been climbed seven years prior. American climbers had by 1948 achieved the high standard required on Mount Brussels but they had not yet migrated to the Canadian Rockies. The first-ascent party used new methods its predecessors did not try, though by today's standards they employed excessive direct aid, fixed ropes and expansion bolts. Mark Powell, a Californian climber who helped create the higher standards, made the second ascent of this route. He used only three pitons and no bolts, as did Gmoser and Kahl on the third ascent.

John Hudson and I felt that a second route on Mount Brussels should be attempted on the side opposite the east buttress route. In the late afternoon of August 7, we crossed the Athabaska River in a cart suspended from a steel cable. We packed part way up the Fryatt Valley and after a night's rest pushed our camp to 8000 feet at the base of a small rock face, directly below the west side of the Christie-Brussels col. The next morning it was snowing. In the afternoon we ascended to the col but the storm forced a retreat. While descending, we noted with dismay that an ice cliff with partially detached blocks lay 500 feet directly above our camp. Sleep came hard that night.

Late next morning in abating snow we retraced our steps to the col. After a traverse of the east snow bowl, we gained the south shoulder as the sun came out. While crossing under the west face we noted, as Frank Smythe had said, that "water falling off the face lands several yards out from the cliff."\* At the Brussels-Lowell col we stopped to study the "impossible" face. It appeared to be a two-day venture which would follow a steep inside corner which faced to the right on the left side of the face. After a long, overhanging section in the corner there was a possible weakness which led left around the west buttress. The route then appeared to follow a steep corner to a very large shelf extending part way across the west face. From this shelf we felt that a way could be found through the 300-foot, 85° wall above.

The first pitch started up a rotten groove. We passed a bulge and climbed out of the groove to the left when it turned to an overhang. After another bulge we again followed the groove to a large platform. John took the next lead. He stepped right at a bulge, mounted it and entered

<sup>\*</sup>Smythe, F., Climbs in the Canadian Rockies, page 103.

a small chimney. Rotten rock made the next lead difficult to start. A strenuous bulge was passed, then moderate climbing followed to a belay on the right wall under a ceiling. In this sheltered spot we stopped to eat. John had caught some rockfall at the previous belay spot but he was still quite fit.

The next two pitches overhung. To avoid the overhanging corner, I tried unsuccessfully to go right. Retracing my steps from a blank vertical wall, I almost fell when my hammer slipped out of my hand and hit me very hard in the mouth as I was standing out of balance to remove a piton. The only way now was a frontal attack of the main corner. Pitone placing was slow in the easily expanding cracks. At the top of the first overhanging corner I nailed a ceiling and gained a stance above, then climbed a bulge to another stance and made a belay mostly standing in slings. The next lead followed the corner up a consistent 110° angle until the rock eased off and allowed some difficult, free climbing to a ledge on the left. Throughout this part the packs were hauled and the pitons removed with difficulty, to be used higher. But our chances were improving, now that the inverted corner was behind us.

The foot-wide and 10-foot-long ledge where we stood straddled the buttress. From its northern end, we followed an ascending ledge system on the north side of the buttress till it ran out at the base of a steep corner. We started the next lead at nine P.M., climbing a corner and an overhang on slightly rotten holds. In semi-darkness we made our way up a chimney to the steep wall which led to a ledge, placing us 40 feet below the large shelf that broke the west face. A belay anchor was difficult to place on this scree ledge. It was exhausting work to haul the packs and John had to climb up several times to free them. The stars lighted our way on the next pitch to the huge shelf, and up talus to the base of the upper wall where we made a cold bivouac, happily in clear weather, a luxury in this range.

As we stretched our stiff muscles in the dawn, we surveyed right above us a nearly vertical 300-foot flake, partially detached from the main face. An appalling, black, iced, overhanging chimney separated the flake from the face, which, to the right, also overhung and was covered with *verglas*. We traversed right for 200 feet and looked around the corner. Our shelf ran out, but we spotted a line through some overhangs and up a chimney on the now 80° wall. Below us, rocks plunged noiselessly and landed well out in the snowfield at the base.

As the sun reached us, I climbed a groove and the wall above until it steepened. I then traversed left on breaking holds to the main chimney. John's only possible belay stance was at the bottom of the rockfall funnel.

By some quick side-stepping he kept the blows to a minimum. I surmounted an overhang where a fearful number of holds broke. A brick-sized rock fell 80 feet free, hit the face in front of John, and careened into his stomach. When John had regained his wind and I my composure, I continued up a steep crack to the left of the impossibly rotten corner. After clearing a bulge I regained the corner and a belay, partially standing in slings.

The next lead was the most dangerous of the climb. Above a short chimney I ascended the right wall to a bulge, which I managed by jamming my hands into an iced crack. The chimney became overhanging and flared. I placed a poor piton in the only crack. A grim struggle up this rotten, bomb-bay chimney commenced. Although John was sheltered, an occasional ricochet would seek him out. I finally fought my way to a ledge, a belay point 60 feet below the top of the wall. John led past over a bulge and angled up left to the base of a scree-covered gully. After some lunch we climbed the gully on slabs and gained the crest of the peak. We finally reached the broad scree pile of the summit at about two P.M.

There was not a cloud in the sky or a whisper of wind. It was hot, but we found water at a nearby snow patch. With a panorama of Alberta, the Twins, Clemenceau, Edith Cavell and Robson we felt justly rewarded with the fourth ascent of this peak. We traversed the peak and descended the standard route on much better rock. This route looks like a challenging and enjoyable ascent.

We moved camp to avoid another night under the ice cliffs. The next day, as it started snowing, we packed out to the Athabaska Falls. The wintry Canadian summer resumed again after this brief respite.

Summary of Statistics.

AREA: Canadian Rockies.

ASCENT: Mount Brussels, 10,370 feet, August 10 and 11, 1964. First ascent of the west face by Arthur Gran and John Hudson.

TECHNICAL DATA: Pitons needed: horizontals and verticals—3 knife blades, 2 extra-long knife blades, 12 assorted, 1 rurp; angles—1 each of ½", 1¼", 1½", 2", 2½"; 5 regular; 2 of 1".