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The Ascent of Mount Bona

ALLEN CARPÉ

THE St. Elias range, which borders the coast of the Gulf of Alaska from Cross Sound to a somewhat indefinite boundary with the Chugach mountains west of Mt. St. Elias, contains some of the grandest elevations of our continent. A remarkably high relief, combined with intensive glaciation, produces a scenic type not easily matched anywhere else in the world. Although the ice cover has diminished in recent times it is still well-nigh Arctic in extent; but its character is entirely Alpine.

The range has its highest development in the district north of the Malaspina glacier. Here, also, it achieves its greatest extension inland, being bounded on the north by the White River and to the west thereof approximately by the valley of the Nizina River, beyond which rise the great summits of the Wrangell mountains. In the region so defined, Mt. Logan and Mt. St. Elias are the highest summits. Farther north Mt. Lucania attains 17,147 ft.; this is followed by Mt. Steele (16,644 ft.), Mt. Bona (16,421 ft.), and Mt. Wood (15,885 ft.).

These peaks are scattered somewhat irregularly over an area roughly 10,000 square miles in extent, for the most part heavily glaciated, with valley levels of only a few thousand feet. Each major summit commands a considerable system of glaciers and subsidiary ranges. Mountaineering is still concerned with the attainment of the primary massifs. The ascent of each of these may entail

¹ A quadrangle drawn from Icy Cape northward to Skolai pass, thence east across the northern face of the Natazhat range to the Donjek and somewhat east of south through the Kuskawalsh glacier to Mts. Alverstone, Hubbard and Seattle, closing along the shore line of the Malaspina glacier, embraces about 10,000 square miles and will include all the prominent peaks of the St. Elias group proper. The Alpine area of the contiguous Wrangell range, is about half as large.

weeks of work and travel beyond the snow-line, of communion with those higher mountain fastnesses which we know less intimately in lesser ranges. Herein lies perhaps the appeal of these big climbs; for none so far accomplished affords the interest of serious "technical" difficulties. They require rather the ordinary precautions of travel on ice and snow, and the organization of a party for sustained effort. Given a competent method of attack, success depends really on time, supplies, and transportation.

From this standpoint Mt. Bona seemed a feasible goal for a trip in which Terris Moore asked me to join him last summer. We could not leave the eastern seaboard until the first of June, and there had been no opportunity for advance preparations in Alaska. This ruled out more remote objectives, like Mt. Lucania. Mt. Bona, we knew, was situated near the northern limit of the St. Elias range and was therefore open to approach from that side. Its immediate domain is defined by the Russell glacier on the north and the Klutlan glacier on the east, both sources of the White River, and on the south and west by tributaries of the Chitina and Nizina rivers.

On June 12 we reached the little town of McCarthy. Andrew Taylor, companion and friend of former seasons, had bespoken the necessary pack horses, gasoline for the stoves and other requisites. A sleigh had been ordered from Chitina for use on the lower ice. The morning of the 15th saw us ensconced with our baggage on a motor truck which carried us at a good pace over the Nizina bridge and thence to Murie's roadhouse, below the Dan Creek mines. Here Harry Boyden's horses met us.

Our immediate objective was Skolai pass. The Russell glacier is accessible by this curious divide, which results from the capture of the head basin of Skolai Creek by a lateral overflow of the Russell glacier some six miles above its snout. The main ice stream, below this point, turns somewhat east of north, while Skolai Creek flows westward to the Nizina.

There are two routes from McCarthy to Skolai pass. The shorter one, usually traveled in the summer months, ascends the north fork of the Chitistone to Chitistone pass, whence one may descend rather steeply into the head basin of Skolai valley. This route was still closed to us by late snows. The longer "winter trail" continues farther up the Nizina and ascends Skolai Creek directly to its summit. Both Chitistone River and Skolai Creek are tributaries to the Nizina.

In these valleys glacial processes on a large scale are still active. As lately as 1912 the forks of the Chitistone were blocked by the Chitistone glacier, flooding the deep canyon of the north branch. The Nizina glacier descends now some distance below the mouth of Skolai Creek; the lower part of Skolai valley is annually converted by it into a wide and deep lake, several miles in length, which eventually finds an outlet under the ice. This lake basin was almost empty when we passed through it, but was filling rapidly from the spring thaw. Stranded icebergs of the previous season dotted the gravel plain, and the margins of the valley were lined with a series of benches, extending several hundred feet up the hillsides, marking the shore lines of different years. Deeply washed-out gullies testified to the force of the flow when the lake is drained. The bursting of this glacial lake sends destructive floods far down the Nizina. head of Skolai valley was formerly occupied by a shallow lake scooped out by the Russell glacier. In the last few years this has largely silted up. The ice has also subsided greatly. A refuge cabin is maintained by the Alaska Road Commission on the margin of the lake bed, where there is swampy ground and some growth of grass for the horses.

The first two days' travel brought us to the Nizina glacier, and the 17th was spent in crossing it. We emerged on to mossy, heathery meadows, dotted with wildflowers and bluebells, where the trail meandered among willows still in the catkins. A long march on the next day unfolded delightful and varied scenes, dominated by the majestic Mt. Regal (13,750 ft.) rising behind us from the Nizina glacier—a beautiful peak, at the eastern front of the Wrangell mountains. Serrated ranges of lesser altitude enclosed our route on either side. As we gained elevation soft snow drifts made difficult work for the horses, and we finally abandoned the greater part of our loads in order to reach the shelter cabin before night. On the 19th the supplies were brought up while others of us collected willow wands for trail markers, and cut a stout willow pole for the sleigh. Finally, on the 20th of June, the horses carried our baggage several miles up the Russell glacier and set us down on a moraine ridge, near the west margin of the ice.

The next six days were occupied in hauling our supplies to the base of the mountain. We had, at the outset, probably between 500 and 600 pounds. Our procedure was to put the smaller half of this load ahead as far as possible and cache it. In so doing, a trail

was broken through the soft snow and slush and well trodden down with the snowshoes. This froze sufficiently over night to provide easier hauling the next day. On the second morning we broke camp and carried the balance of the outfit some distance beyond the cache, until the thawing snow again stopped us. On the third day we had a good track for bringing up the cache. We continued with it and again cached it some distance in advance of the camp. This was continued with two intermediate camps before reaching the head wall of the Russell glacier, which is the great north face of Mt. Bona. The distance between camps averaged about four miles. The weather favored us save on the 24th, when we followed our willows and the snowshoe tracks through mist and snow.

We were now at an altitude of 8,700 ft., with enough provisions for a month's campaign. The mountain rose above us in a broad wall of terraced ice, nearly 8,000 ft. high, divided by many icefalls into an intricate network of ledges and vertical risers. At the right, the sky line dipped to a saddle some 13,000 ft. high. The ridge lifted out of this in a steep pitch, so steep that sheets of snow slid off repeatedly from it during our march up the lower glacier, exposing a tracery of rock.

On the 27th we started up, carrying packs of about fifty pounds. At the lower elevations we had to travel in the very early hours, from considerations of safety and to secure passable going; but above 10,000 or 11,000 ft. it does not thaw much. Ascending an avalanche fan between two icefalls, we attained a broad terrace which carried out to the right across the face. This gradually steepened and merged into another ascent, the top of which was constricted by crevasses encroaching from either side. The snow throughout was soft and the passage of the steepest part quite ticklish. As we looked back, down the valley, the winding course of the glacier was framed against the impressive outlines of séracs and ice cliffs which seemed almost to overhang our path; actually, however, we had little difficulty in keeping free of the debris track. To the east, the outlook across the flank of the mountain revealed increasingly the magnificent scale of the peak.

Near the top of of this draw, where a crack forced a long return to the left, we left our packs the first day. On the 28th we brought up one tent and more supplies. The crevasses which had terminated the direct ascent occurred at the very top of the steepest pitch, so that its lower lip formed a crest of ice partly buried in snow. We traversed carefully along this until a crossing was found, then continued up an open slope with few crevasses, in the general direction of the saddle, to a height of some 10,300 ft. Here the ascent became almost too steep for snowshoes, yet without them there was no footing, and the route towards the saddle was not certain. Even from far down the glacier, a formation of large crevasses hid the terrain below the saddle. Now we were so close under them that the view was entirely blocked. We dug out a tent site and set up the camp, then went back for the cached loads.

The next day was devoted to an investigation of the route to the saddle. Above us, the valley edge of great crevasses bulged up to curious corniches and pinnacles of ice which hid everything beyond and made it appear uncertain whether we should get through them. One of us circled far out to the west and circumvented at least the main system of cracks; meanwhile the others encountered little opposition in a direct ascent and succeeded in establishing a route all the way to the saddle. Following this, with the camp equipment and a few days' supplies, we established a camp in the saddle on June 30.

It would be difficult to find a location to which the term "saddle" is more apt. The contours of the ground were almost exactly those of a riding saddle. The slopes coming up from either side of the ridge tapered off gradually to a level area in the center. The ascending slopes rose out of this in equally smooth and uniform curves; but the one leading toward the main peak soon gathered steepness and became somewhat narrower. It rose to a considerable bulge some two thousand feet above us, hiding the summit and the ridge beyond. We were on a spur which divides the main basin of the Russell glacier from a western tributary of the same. Beyond the head of this tributary another spur jutted out toward the Chitistone glacier and supported two very striking peaks, probably 14,000 or 15,000 ft. high. They are located in an unsurveyed area. The two spurs join higher up in the true west ridge of Mt. Bona.

At this height, in good weather, there is crisp, wind-blown snow under foot. The nights are cold (7° F. on June 30), but the lack of thawing during the day makes for little glazed crust. More common is a dry, compact, crystalline surface, not bad for walking, which is sometimes ridged by the wind into the curious forms which Arctic travelers call "sastrugi." Snowshoes had been left below.

We relied on crampons for the remainder of the ascent. Nor did we take the rope above the saddle.

The temperature had risen to 12° by 5 a.m. of July 1. The weather was clear. We left the tent about 7 a.m., but had scarcely got away when clouds began to drift in, forcing a return. An hour's wait brought little change; but the mists were thin overhead and we hoped to get above them. We steered as best we could for the highest part of the rise. Presently we came abreast of the first outcropping rocks. Veering to the right of them, we followed lanes of harder snow and after a climb of perhaps 1,500 ft. approached the bulging shoulder of the ridge. Almost imperceptibly we had emerged from the mists. They lay below us now, a vast blanket of clouds stretching away to the horizon. Above them, sixty miles distant, the peak of Mt. Blackburn shone white in the clear sky. A second summit, lower or more distant, just topped the clouds. We thought of Mt. Sanford; but later examination of the map makes it seem doubtful that it could be seen from this altitude.

The ridge continued to mount, less steeply, hiding everything to the east and south. By noon we attained a pronounced hump from which we had our first view in that direction. The summit rose bravely from a depression at our feet; the top was perhaps 1,000 ft. above us and less than a mile distant. To the right, on the far horizon, Mt. Logan and St. Elias were recognized with a thrill. The clouds were surging about the 16,000-ft. level on the north face of Logan, and we ourselves were no longer much above them. We had been exposed to a cold wind ever since we got above the cloud level. Now it seemed to increase in force. Little wisps of powdery snow drove along close to the ground, despite the fact that there was not much loose snow left on these exposed parts of the mountain after the prolonged spell of good weather. streamers of cloud curled about the upper reaches of the peak, moving rapidly. The whole picture was reminiscent of certain trying experiences with high-level blizzards on Mt. Logan. We were not committed to a dash for the summit. We had time and supplies to wait out the weather; several days' provisions at the high camp, enough for a week or ten days readily accessible in a cache at 10,300 ft., easily as much more at the base camp. We returned to the saddle to await a better day.

In the afternoon Terris went down to the cache for a load of supplies and some personal things. While he was gone the weather

turned worse, very thick and some fall of snow, but not cold. We were worried a little about the possibility of his losing the trail, which was pretty much snowed over; but he returned safely in less than four hours. The route was marked with willow stakes every thirty paces, with additional markers at turns and where crevasses were crossed.

Snow fell intermittently during the evening and night. The lowest temperature—only 18°—was registered in the early evening, thereafter there was a warm wind accompanied by snow and dense fog. The indications were decidedly unpromising, but to our surprise there were signs of improvement in the morning. The western sky remained dark and threatening. Clouds filled the valley of the Russell glacier at our feet and covered the mountains to the north. The outlook from our tent was very impressive.

At 11.30 we made another start for the summit. The going was excellent after we got out of the saddle. Wind had swept the steep slopes entirely free of the night's snowfall. We could follow the crampon marks of the preceding morning. The sun shone, and there was little wind. We felt warmer than on the previous day, although the thermometer presently indicated 4° F. In the west, immense cloud structures piled up above the Wrangell mountains and provided throughout the day the most striking feature of the view. Judging roughly by the height of the mountains, some of the formations must have towered 25,000 ft. in the air. After a rather threatening sky in the early morning, the clouds seemed at first quite static and we felt safely removed from them. As the day progressed, however, they reached out like an advancing tide toward the outlying peaks of the Chitistone basin, towering so high above them that they seemed constantly in danger of being engulfed. At the same time, light streamers began to form about the ridge of Mt. Bona. Beyond, to the south, the valleys leading to the Chitina were filled.

At 4.30 we reached the hump of the preceding day. We descended from it several hundred feet to a considerable stretch of undulated terrain which intervened before the base of the final cone. Here a few crevasses required care, being curiously crusted over so that there was little visual sign of their size and direction. We stopped a moment in a little pulpit-like platform which looked out toward the south; like Mt. Logan and Mt. Lucania, the southern face of Bona exposes steep, rocky cliffs, while the northern

slopes are more rounded. The rocks (which we did not attain) were of a reddish color, presumably of volcanic origin. This declivity on the south gives the peak of Bona a fine, upstanding appearance when viewed along the ridge.

In the foreground, slightly to the west of us, was a peak belonging clearly to the Bona massif, perhaps the one shown on the Boundary map (general sheet) as 15,100 ft. The valleys of the Hawkins and Barnard glaciers, great tributaries to the upper course of the Chitina, lay beyond it, but we saw nothing of them save a sea of billowing cloud. Mt. Logan was very clear, although 75 miles distant, and we could trace the route of its ascent. It was interesting to note that its eastern summit appeared much lower than the other two.

There was an area of accumulated soft snow which slowed us up a good deal as we approached the final ascent. Good footing was regained when we emerged on to steeper slopes. One or two large cracks raised a question about the route, but they were crossed without difficulty. At 6.30 the slope eased off and, almost before we expected it, we stood on the summit of Mt. Bona.

Terris put out the thermometer, which registered just zero. The outlook was expanded but little from that enjoyed during the climb, for the Natazhat group was hidden and we saw nothing in that direction save glimpses of the lower summit of our own peak, smothered under driving clouds. Occasionally we, too, were shut in by them. At other times the sun broke through, and we sought to recognize the great mountains to the southeast of us: Bear, Lucania, Wood, etc. Of these, Mt. Lucania was the most distinct.

We started the descent at 7.15. Most of it was down-hill, and the camp was regained about 9.30. The next morning was cloudy. We broke camp and started down in heavy mist. At the cache (10,300 ft.) we picked up a few things, abandoning the surplus food and gasoline. We continued down, picking our way among the crevasses in the fog. The footing became worse as we lost altitude, the last stretch above the base camp being of a wet, coarse, granular snow which reminded me of nothing so much as a similar descent to Cascade Camp on the return from Mt. Logan.

The night was warm (27° F.) and several inches more snow fell. The sun came out in the morning, however, and it was clear overhead, although mists hung low in the valley. We abandoned

all unnecessary food, but still had a good load on the sleigh. The going was unexpectedly easy, the sleigh holding up well on the snowshoe track. We passed our first way camp on the descent soon after noon. Farther down, we got into a bad slush area surrounding a surface lake. The head of the lake ran back into crevasses adjoining the medial moraine, where we could not go with the sleigh. The outflow channel ran between high, slushy banks. We maneuvered the sleigh into a position to haul it across, but when we got it in motion a piece of the bank collapsed under the weight, damming the channel and throwing the water high against the side of the load. We pulled ahead quickly and upon examination found nothing damaged. We sat down for tea on a high point of the moraine about 4 P.M., then had fair going on bare ice with some snow-filled cracks to the site of our next way camp. We worked along the west marginal moraine towards our starting point, where the horses had set us down two weeks before. Rough ice forced us out into the center of the glacier for a time; but at 8.30 P.M. we brought up opposite the cache and stopped for the night.

Another pull in rain and fog carried us down the last stretch of the glacier. The visibility was so poor that we got into a field of hummocky ice within a mile of our destination, where progress with the sleigh was next to impossible. In the end we abandoned it and proceeded on foot, with our bedding and light packs, to Skolai cabin. The next day, with gradually lifting clouds, we returned to the sleigh and brought it down off the ice. We had farewell glimpses of the summit of Mt. Bona up the glacier. We packed the supplies to the cabin, where Harry Boyden was to pick them up on his next trip to Chisana, and set the sleigh against an old, mossy moraine clear of the ice, for future salvage.

With a return of perfect weather on the 7th we set out on foot for McCarthy. Mountaineering paraphernalia were largely left behind. Our days on the heights were over. We crossed the flat of Skolai basin and climbed 1,000 ft. or so to Chitistone pass, where the snow was melting away rapidly. The warmth of spring was in the air. The Chitistone at first descends gently, among pleasant meadows and mountains not unlike those of the Canadian Rockies. After a few miles, the stream drops into a deep and narrow canyon, while the trail mounts high across steep-cut banks to avoid the cliffs. This passage is called the "Goat Trail" and it is truly an adventurous place, the mountain-side being in places

so steep that it is hard to believe that a horse could stick on it. We did not look at the barometer, but it seems to the writer, in recollection that the ascent could not have been less than 1,500 ft., and the subsequent descent fully 2,500. Yet this is the principal pack route to the once flourishing Chisana district and the White River country! The trail leads out upon high benches overlooking the confluence of the two branches of the Chitistone River, the east branch occupied by the Chitistone glacier in obvious recession. Looking up this valley we saw high, snowy peaks and recognized with a thrill the very slopes of Mt. Bona which we had climbed. There was much more snow now. The precipitation which had come after our descent had evidently not been cleared away by winds: we should have had harder work a week later.

That night we slept on a gravelly flat below the Goat Trail, without tents, among hordes of mosquitoes. It was not difficult to make an early start in the morning. The day's march brought us to Glacier Creek mining camp, where the stream of that name was crossed in a cariole slung on a cable; the Chitistone had been crossed higher up by a similar conveyance. On July 9th we walked to Spruce Point for lunch, on the Nizina River, and in the afternoon to Dan Creek, a total distance of 13 miles, whence the remaining 20 miles to McCarthy were covered in a car sent in response to our telephone call from the mine.