Appendix

These send their tribute chiefly through two deep longitudinal valleys, immediately opposite to one another, in the another, and occupied a smaller angle in the perspective, strike of the range, which extend about six miles on each it became difficult to distinguish those of the Notre Dame side of the gorge, and emptying into it, are terminated by two master summits at their extremities, thirteen miles southward, a sea of parallel undulating ridges occupied a summits at their extremities, thirteen miles southward, a sea of parallel undulating ridges occupied and the summits at their extremities, thirteen miles are the southward, a sea of parallel undulating ridges occupied and the southward and the southward as the southward and the southward as the southward as the southward and the southward as the southward in a straight line asunder, while several transverse valleys assist the others in carving the mountain mass into a considerable number of lower but important tops.

Both the principal summits we visited. In ascending the eastward one, which stands exactly opposite to the lower part of the valley of the Chat, and seems to terminate it, looking from the St. Lawrence, we clambered up the north side of the range, which presents a face whose slope cannot be much under 45°, for 3000 feet; and we found that before the horizon was clear over the lower ridges between us and the great river, we had attained the elevation of 1753 feet above its surface. The highest spring of water we could discover, which was an abundant one of excellent drinkable quality, coming from the strata at the upper base of the peak, was 3544 feet up. The summit peak itself, a bare pointed rock, was 3768 feet, while the broad flat top of another mountain summit, two miles to the westward, which went among us by the name of Mattawees (the Micmac word for a porcupine)—from our having killed one of these animals as we scaled and on which we rested the first night of our ascent, having reached it by mistake, was 3365 feet. A deep ravine separated Mount Matawees from the main peak, and another one severed it from a dome-shaped top nearly its own height, about a mile and a half to the westward, between which and the gorge of the Chat stood another gigantic boss.

The main summit to the westward of the Chat, to which we gave the name of Bayfield Mountain, in honor of Captain Bayfield, who on one of his Charts has indicated its position, we ascertained to be 3471 feet, after having reached it by a very steep and fatiguing ascent from the gorge to a precipitous mountain knob, 2669 feet high, which acquired the title of the Old Man, from the existence of an erect stone in a step at his edge, in the position of one watching what might be passing below-and a journey along the ridge of a triple-topped hill over 3000 feet high, separated from Mount Bayfield by two ravines, and an interposed mountain of more moderate elevation.

All these heights given between the two extreme summits, are the links of a chain standing on the north side of the longitudinal valleys which have been mentioned, and while they constitute the most clevated serrated ridge, none of them are much more than a mile from the northern base of the whole belt. The five miles which compose the remainder of its breadth, present summits of more moderate height, and one of the most clevated of these, which stands conspicuously protruded into the gorge on its east side, and was named the South Mountain, we found to be 2413 feet. The whole of these, as well as the northern crest, are abrupt on the north side, and in general more sloping on the south, in the probable direction of the dip of the strata; and these, as indicated by the ridges, have a strike which in this part of the range may be considered E. N. E. an W. S. W., magnetic.

From the highest summit we visited, the panorama displayed was of the grandest description. In the northern half of the circle, the waters of the St. Lawrence, dotted with its ships and fishing boats, spread out to the right and to the left as far as the eye could reach. On its northern shore, immediately in front, unaided vision could plainly distinguish the lighthouse of the Pointe des Monts, some fifty miles off, from which the granite hills rising immediately behind it in the interior, gradually sunk below the horizon as they receded from us, following them down the expanding gulph, to a point where we thought we could discern the Island of Anticosti, one hundred miles away in the mist of the distance, while at our feet were arranged

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The whole area unwatered by the Chat may not exceed Range, filled up several degress of the circle, and one three hundred square miles. Nearly one half of this lies summit which exhibited a patch of snow, we supposed to the south of the great mountains, or among them—might be higher than the point we stood upon. Many of These send their tribute chiefly through two deep longitu
The whole area unwatered by the Chat may not exceed Range, filled up several degress of the circle, and one summit which exhibited a patch of snow, we supposed to the south of the great mountains, or among them—the peaks were bare, and as they retired one behind the picture, the more distant of which we conceived might present a table land, with a few marked points rising in cones and domes; and through one gap, which probably was the valley of some south flowing river, we distinguished a faint blue horizontal line, which we fancied might be in New Brunswick. . Prominent points became still fewer, veering westward, until the horizon was again interrupted in that direction by a well defined outline of a not very distant part of the range from which we looked.

> The highest summits within our view were generally bare rocks. Those next in the scale were crowned with sturdy dwarf spruce trees, many of them not five feet high, but springing up so close together that their branches interlocking, rendered it very difficult to make way On those still lower, spruce became mingled with white birch, and the size of the trees gradually augmented in proportion to the decrease of elevation. feature in the vegetation high up in the hills, that struck us forcibly and gave us much satisfaction after confinement in the forest below, was the great extent of open glade that appeared on all sides but the north. Wide slopes on the east, the south, and the west, were carpeted with the most luxuriant growth and abundant specific diversity of ferns, from which clumps of spruce or of white birch, or of both mingled, started up here and there, giving the hills occasionally almost the character of park scenery, as if art had arranged the distribution with a view to ornament, and often producing, in combination with peaks, ravines, and a distant horizon, landscapes of a very pleasing description. sing description.

> On the hills on the banks of the Chat and in the low grounds, the timber consists chiefly of spruce of good size, balsam fir, white cedar, and white birch, with occasional poplars in wet places, and a frequent fringe of alders on the margin. Maple is scarce: we saw only one grove of a size fit for sugar trees, and this was at the north base of the Mattawees Mountain, where we commenced our ascent. White pines were not wanting, though not over abundant, and it was evident to us that the lumberer's axehad never tried its edge upon them. Ascending the stream we saw trees enough close upon the water to furnish a good stout cargo without any haulage, and in the space of a mile back from it in one place were counted twelve good long stemmed trees, measuring from nine to ten feet round at five feet from the ground, and thirteen trees of the same size in another.

> The small number of rapids and cascades in the Chat would render it an excellent stream for driving lumber, and if there were a good port in its vicinity, what withpine for square timber, spruce for saw logs, and white cedar for shingles and lathwood, a few cargoes might be got out profitably.

The soil of the Chat above its mouth is of a light description, consisting of sand and gravel; but I greatly doubt whether there is much soil at all on the hill tops and sides. The low parts, such as the meadows on the brooks, might perhaps yield some fair grass land if cleared; but the valley is narrow, and the quantity of this can be but small.

Abandoning our canoes on the Chat, the general course of our pedestrian journey through the forest across the water shed between the St. Lawrence and the Bay Chalenr to the Conical Mountain fixed by triangulation from Notro Dame Range, was about S. 40 E. The distance in a Dame Range, was about S. 40 E. The distance in a straight line was about twelve miles and a half, but the deviations of our route increased it to thirteen miles and three quarters. The position of intermediate stations we deterin parallel lines the ridges and valleys of the lower land between us and the river. To the eastward a confusion of mountains and ravines belonging to Notre Dame and checking our calculation by bearings and angles on the

Appendix (G. G. G.) 9th June.