

too low, and we must apply to them a correction of fully 100 feet.* As the mean of many careful observations he made the surface of Nictor Lake 777 feet above the sea, *i. e.*, with the correction 877 feet. He made Bald Mountain (or Sagamook) 2496 feet, *i. e.*, 2596 with the correction. If to this we add the 112 feet which Carleton surpasses Sagamook or Bald, we have as the height of Carleton 2708 feet, which is very close to the 2715 of Big Bald.

If one were to take Hind's correction of 123 feet for Wightman's results, instead of the 100 here adopted, it would make Carleton 2731 feet, thus surpassing Big Bald considerably. I by no means think, however, that reliance can be placed upon these latter figures, but they at least should make us cautious in forming a judgment as to which is the higher mountain. Big Bald and Carleton must be very near the same height, with the probability in favor of Big Bald. The relative heights could be best settled by a comparison of careful theodolite measurements made from the summit of each upon the summit of the other.

26.—ON A DIVISION OF NEW BRUNSWICK INTO PHYSIOGRAPHIC DISTRICTS.

(Read May 2nd, 1899.)

Whoever attempts a systematic description of any class of facts or phenomena, or treatment of phases of local history, for the whole of New Brunswick, must feel the need for some natural and recognized

* Wightman's figures are too low, because it was assumed that the levels along the St. John, from Fredericton to Grand Falls, made in 1826 by Foulis, were correct, whereas they are inexplicably erroneous and low. Hind (Geological Report, 1865, 31) has shown that this is the case, and arguing from levels taken by Graham in connection with the survey of the north line in 1842, and from those on the Royal Road, he reasons that Foulis' figures are about 123 feet too low. Other measurements by Wightman himself show a discrepancy between head of tide above Fredericton and high tide on Bay Chaleur of 77 feet, which is explained by the report as due to high tide level at Fredericton being 80 feet above high tide level at St. John. This we now know is erroneous, for Duff has shown (this Bulletin, XV, 69) that mean tide at Fredericton is only about 14 feet above mean tide at St. John, and hence high tide level is about the same at both places. But I think Hind puts the correction for Wightman's error too high, for I think Graham's figure of 419 feet for the river above the fall is too high. It is higher than the Royal Road levels. Graham, moreover, gives the monument at source of the St. Croix as 538 feet above mean tide at Calais; later measurements of the surface of Grand Lake (from which there is continuous deadwater to the monument) based I believe on railroad levels, given on the geological map, make it only 499 feet. Probably we would be safe in giving a correction of 100 feet to Wightman's figures, though if we wished to be extra conservative we might restrict it to the correction supplied by Wightman himself in his difference of 77 feet above high tide in Bay Chaleur, plus 3 feet to reduce the latter to mean tide, that is, in all 80 feet.