

why this is so, may not at first be apparent ; it certainly is *not* because the mean Summer temperature, in many parts of Eastern Canada, is not sufficiently high to mature the germs of Malaria did they exist ; nor that the cold of Winter, infinitely inferior in degree to that common on the North Saskatchewan, and far south of that line destroys the germ, or forbids its development—not this at all—the immunity is probably due to the circumstance, that soil formed by the disintegration of archæan or primitive formations, which constitute the special Geological features of lower Canada, does not provide either the necessary matrix or pabulum, required for the generation and development of the germ of Malaria ; as not only there but wherever these primitive crystalline formations constitute the distinctive Geological characteristics of a country, malarial disease will be extremely rare, if not altogether unknown.

Throughout the Northwest Territories, including nearly the whole Province of Manitoba, and the extensive districts of Assiniboia and Saskatchewan ; a very large part of Alberta ; by far the greater portion of Athabasca, and still further north-westward, the conditions here referred to are altogether wanting ; almost the whole of these broad expanses being of *cretaceous* and later tertiary formation, overlaid with more recent aqueous deposits, and over immense tracts of these widely expanded regions, under favorable climatic conditions ; more especially under the very high ranges of temperature at certain seasons prevailing ; Malaria will be extensively generated, as indeed, experience has taught me it is. I will endeavor to explain why :

If we examine any good map of North America, upon which the isothermal lines, first indicated by Baron Von Humboldt, are laid down, we shall find that as they approach the eastern slope of the Rocky Mountains, and at immense distances from their base, they acquire a rapidly increasing and very remarkable degree of *Northing* ; until in the northern parts of Assiniboia and the western half of Saskatchewan, they gradually assume a direction and follow a course considerably north of Northwest ; and ultimately nearly due north, carrying with them over these remote regions beyond the northern limits of Athabasca, and throughout the broad and fertile valleys of the Athabasca and Peace rivers to their embouchure upon the Great Slave Lake, the very high ranges of Summer temperature commonly prevailing in Southern Manitoba and Assiniboia. The significance of these important facts will more readily become apparent when it is understood, that the mean summer temperature at the Great Slave Lake in 62 degrees of north latitude, is precisely similar to that at Qu'Appelle and Medicine Hat in Southern Assiniboia, nearly twelve degrees, that is 800 miles to the south of it ; but along the North Saskatchewan river and notably at Battleford, the mean Summer temperature is five and a half degrees higher, and over the whole of this broad expanse, Malaria under favorable conditions will be largely generated.