

or in the same neighborhood, must be received with considerable caution, and it is only when we have a series of observations, consistent with themselves, that we can place much reliance upon the results.

In looking over the declinations, as observed by the various land-surveyors in Upper Canada, which were obligingly communicated to me by Mr. Fletcher, one could not fail to be struck with the extraordinary differences obtained by different surveyors, and often by the same person in the same neighborhood. Much of this is no doubt owing to carelessness in the observations, and imperfection in the instruments used, but, in a great measure also, it evidently arises from local attraction. But if for this reason we can place no great faith in an isolated observation, if we take a number of them, nearly about the same period, and in various parts of the same region, we may obtain a sort of average, which may be depended upon as nearly correct. The whole surveyed portion of Canada forms such a narrow strip of land, that it hardly affords space enough to determine with any accuracy the direction of any isogonal line; but the locality in which such a line crosses Canada may be given with tolerable precision, and the direction may be obtained by comparing it with the ascertained declination on the coast. Thus, from 1819 to 1823, there appear to have been about twenty townships surveyed, in which the needle did not deviate as much as a degree either to the east or west of north; and the line of no declination, about 1820, passed through the counties of Brant, Waterloo and Wellington. Similarly at the same date the line of 5° westerly variation, passed through the counties of Leeds and Lanark.

By thus multiplying observations, both in different places, and at successive dates, we may also conclude that some remarkable discrepancies which present themselves are not mere errors, or the effects of immediate local attraction; but that some considerable sections of country really differ in their declination from the general course of the lines. Thus it would appear as if the line of no variation about 1820 bifurcated as it approached the shores