

has practised medicine there for sixteen years, said: no doubt, in former years this locality was a veritable Eden, à la *Dickens*, when it is said by the old inhabitants, that there were hardly enough well persons to nurse the sick. Judge Stevenson, of Cayuga, a worthy old gentleman, who had lived for many years on the river, spoke most feelingly on the subject. He said that when he first went up the river (about the year 1846) its malarial condition was something beyond conception. Everybody had the ague, and at times, it was difficult to find enough well persons to perform the ordinary work. Similar testimony was given by Dr. J. Baxter, M.P.P., of Cayuga, who has lived on the river some twenty six years. In conversation with an old gentleman—Charles Smith, Esq., of Newport, near Brantford, the point on the river where the heavy clays largely disappear—I was informed that when over forty years ago he first settled on the river, it was fordable opposite his residence, and that an ox team could be driven across. Then the river seldom overflowed its banks, and malaria was absent; but he said that when the Caledonia dams were built, whereby the water was held back, deepening the riverway a very considerable number of feet and causing the banks to often overflow in the wet seasons, ague became very prevalent.

From this unanimous testimony we can draw only one inference, and that is, that the appearance of malaria of so epidemic a character along the river immediately subsequent to the building of the dams, establishes between them close relations of effect and cause, (at least the existing cause.) The history of the disease since that time has been interesting. Concerning it Dr. G. A. McCallum again speaks very definitely: 'The fever there (*i. e.*, in the earlier history of Dunnville), assumed quite a malignant type—real typho-malarial. Now, however, thanks to a system of drainage, not only is the character of the fever changed to a mild intermittent, but the number of cases is not one-fiftieth of what they were.'

Dr. F. King, of Port Colborne, testified to a marked decrease of late years as the soil has dried out and its excessive organic matter been lessened by cultivation. Similar testimony was given by Dr. Baxter, of Cayuga, Dr. Dee, of Tuscarora, and Dr. Marquis, of Mohawk.

Evidently, the writer of the report, Dr. Bryce, believes that malarial fevers are caused directly by the bacillus malarie, a microscopic vegetable organism of the lowest type, which grows and multiplies in the human body. This belief is becoming universal; it is that long favored by this JOURNAL, and the evidence in support of it is very conclusive: "Now, assuming that the probabilities as to the cause of malaria are in favour of that which will best fulfil the requirements of the case, we must suppose that malarial regions develop certain microbes or bacilli, which, when introduced into the human system, produce intermittent fever. It would hardly seem to come within the province of this paper, to discuss the various other theories which we have stated, simply because none of them, in any degree, seem satisfactory explanations of the causation, although they may serve in part to aid in explaining how the supposed specific bacilli produce their effects. It must be evident to all, that on the assumption of the zymotic origin of malaria there must still exist along the Grand River valley conditions which favour the development of the specific germs of the disease.

It will be evident that the conditions present in every case, where the disease prevails, are those which cryptogamic vegetation, or that of lower plant life, finds favourable for growth and development... As there is no district, even deserts of sand, with a total absence of organic matter, it might be inferred that the discussion of the question of how to prevent malaria is at an end, since it ought to be ubiquitous. But it is not, and we have to attempt to patiently enquire into the reasons why there is in some districts an immunity from the disease. The first and almost self-evident truth is that, the number of germs of the disease must vary (*a*) in different situations and (*b*) under different conditions. Let us briefly discuss this statement. Other things being equal the, soil best