

necessity of registering a death. Many of the United States military posts, situated along the foot hills of the Rockies, south of us, are annually visited by this epidemic, and many mining camps are abandoned on account of its ravages. Among the miners it is known as "mountain fever."

This fever made its first appearance at Fort Walsh in the summer of 1876; one isolated case occurring that year. In the hospital register for 1877, several cases of a mild type appear, and in 1878, eleven cases were registered, three of which presented the typho-malarial type. Last year, 1879, as may be seen by referring to Appendix A, seventeen had the fever, only one of which was typho-malarial. This, however, does not fully indicate the extent of the miasmatic infection; a simple catarrh, and most cases of diarrhœa and dysentery, and other affections, were generally found intractable unless quinine formed the basis of the treatment.

As already stated, many lives were lost during this last epidemic. Mr. Clarke, agent for the firm of J. G. Baker & Co., and Wm. Walsh, nephew of Major Walsh, and an ex-member of the force, succumbed to it. Many Half-breeds and Indians died of it, and the infant mortality among these was very great.

At Wood Mountain it raged throughout the winter of 1878-79, when nine Half-breeds and some Sioux died during its prevalence. None of our men stationed there contracted the fever. I did not hear of its existence in any other part of the western district.

The general prevalence of the fever in 1878, and the typhoid element in many of the cases, roused me to the necessity of finding the cause or source of this unpleasant visitor in a land reputed for its healthy bracing air, and its immunity from infectious diseases, and exert myself to find means of checking its further course and prevent it in the future.

Considering the altitude of the fort, about 3,400 feet above sea level, the rarified and dry state of the air, the constant winds causing a constant change of the air, I did not believe it possible that the miasmatic germs could exist as a *malaria* in sufficient quantity to cause so much disease, and I naturally looked to water as the more likely channel through which the noxious element found entrance into the system. On inspecting the creek supplying the fort with water, towards its source, it was found that the bottom of the valley through which it runs consists of a regular succession of swamps, covered with a thick layer of decomposing vegetable matter and carcasses of horses and buffalo. In rainy weather these marshes overflow and empty their putrid contents into the main stream; even in dry weather there is more or less drainage going on. The innumerable gulches intersecting the valley also find an outlet for their miasma-loaded waters into the creek,—gulches in which the yearly tribute of the vegetable kingdom lies rotting in layers of considerable thickness. During the 12th, 13th and 14th of June, 1878, we experienced a severe rain storm. The night of the 14th the creek rose over eight feet, overflowing its banks by several feet, and submerging the marshy bottom throughout its extent. The water was turbid and nauseous for some days after its subsidence; a few days after this freshet the first typical case of mountain fever as a typho-malarial broke out among the settlers.

It is not only the valley in which the fort is built that is annually visited by the fever, but every half-breed village situated under the same circumstances suffered from the same epidemic disease at different times.

My reasons for believing that the water drunk is the channel of infection, are as follows:—

1. All persons obliged to drink of this marshy water, especially towards the fall of the year, are liable to contract the fever, whether they reside in the valley or in some other locality where malaria is supposed to be impossible. Cases were sent to me from hunting camps which had been on the plains all summer, but camped for a considerable time on the confluence of our mountain streams.

2. During the Indian payment last summer, a small party of half-breeds camped on the summit of the east hill were obliged to procure water from our creek; several had the fever and one young girl died.