

of the "marsh poison" as the malarial agent. This poison he considered to be generated from stagnant waters containing the debris of animal and vegetable matter. The theory of the aëriform nature of the disease was accepted for many years, but all attempts to demonstrate by chemical means the poisonous ingredient of marsh air were without success. Hydrocyanic acid and sulphuretted hydrogen were suspected and accused and as vehemently defended. Livingstone observes of the Zambesi, "the flood water ran into a marsh some miles above the mountain and became as black as ink, and when it returned again to the river emitted a strong effluvium of sulphuretted hydrogen. We spent one night in it and suffered no ill effects, though we fully expected an attack of fever."

As the inorganic matter was shown to be incapable of being the agent of the disease, it was thought that the characteristic toxic effects might be brought about by the less known organic matter. A supporter of this theory defines it as being "a ferment which is probably a highly complex nitrogenous substance capable of being dried and carried by the wind far from the place where it was produced." Beneath the stream of theories and conjectures there had been, however, an under current of opinion that the cause of the disease was a living organism. As early as B.C. 14, Varro had surmised that this was the case, and again in 1778, Lucretius brought forward the same theory. This opinion became more and more pronounced as methods of observation and experiment increased in precision. Dr. Salisbury, of Ohio, by direct observation concluded that the malarial germ was an unicellular alga. Following in the same track, many other observers brought forward fresh germs to be deposed in turn by germs with more pressing claims. In 1870, Dr. Oldham struck a new chord abandoning the beaten track; he states that he found it impossible under any of the usually accepted theories to account satisfactorily for many of the phenomena attending the production of malaria. Malaria as a specific poison does not exist. "I am convinced," he says "that the diseases attributed to malarious influence are caused by chill." The search by the believers in the germ was, however, actively proceeding. In 1879, the bacillus malarie was discovered and named by Klebs and Tommasi Crudeli. Symptoms resembling those of malarial fever were said to have occurred in rabbits inoculated with the culture fluid of the bacillus, and it seemed as if the long sought for germ had at last been found. But it failed, as all others before it, to stand the test of closer investigation. Dr. Sternberg, of the U. S. Army, showed that healthy rabbits sometimes exhibited diurnal variation of temperature as marked as those on the charts. The evidence on which the claims of the bacil-