

breaking up into individual spherules, some of which are seen floating free in the plasm. Here is evidently a cycle. The large pigmented body is the mature animal ready for sporulation. The segmented mass is the same with the spores formed and the isolated spherules are the free spores. The latter attach themselves to a corpuscle and the cycle begins afresh.

The existence of the malaria parasite being established beyond a doubt, it became necessary to discover the path by which it entered man in order to establish a complete cycle of its life history. It was certain that the malaria germ must come from without, but all attempts to find it in external nature were failures. There was but one other method of research—to follow the parasite from the human body back through its extra-corporeal life and back into man again. It was along this line that Dr. Manson carried out his inquiry in 1896. It was shown that the residence of the plasmodium in man was not accidental, but in the interest of its species. It was a true parasite, and obeying the laws of parasitism, must have acquired habits which make the continuance of its species possible, namely, the right way of entrance into the body of its host and the right way of exit from it. Certain well known facts pointed to the nature of this acquisition. The blood of a malarial patient suffering from a pernicious form of the disease, contains a form of the parasite termed the crescent body. These bodies, after the blood had been drawn for some time, were observed to take on a spherical shape and become flagellated. An interpretation was given to these facts by Dr. Manson, for the first time as follows:—"The crescent body which proceeds to flagellation is the extra-corporeal homologue of the intra-corporeal sporulating body, and the flagellum is the extra-corporeal homologue of the intra-corporeal spore. Both types of sporulating plasmodium have corresponding functions, both arise from the same source; one is the germ of the plasmodium inside the human body, the other, the germ of the plasmodium outside the human body." The fact that this process of flagellation only occurred when the blood was drawn from the containing host, led Manson to the inevitable conclusion that the plasmodium made its escape from the body through the agency of some suctorial insect, probably the mosquito.

Long before Laveran's discovery of the parasite of malaria, it had been conjectured that the mosquito was in some way mixed up with the causation of the disease, and the fact that the mosquito and malaria are both paludal in habit is suggestive of such a connection. An article by King, in 1883, was the first written exposition of the mosquito-malaria theory, and Laveran in 1884, suggested that a connection