

Yellow Fever.

The story of the connection of the mosquito with malaria is now well known, and it is realised that the problem of its elimination is identical with that of the *anopheles* mosquito. It is beginning to be understood that the conquest of yellow fever is similarly dependent on the eradication of the *Stegomyia fasciata*, the yellow fever mosquito, and a most interesting report has been compiled on the subject relative to the work of the late Major Walter Reed, of the Medical Corps of the United States Army and the Yellow Fever Commission, which was presented to the Senate and printed, with illustrations, for the use of that body. The preface states that the work of Major Walter Reed, and the Commission of which he was President, and the masterful mind, have been so beneficial and far-reaching that its importance is considered secondary to no other scientific achievement.

In the course of a popular lecture delivered at Galveston under the auspices of the University of Texas, by Dr. James Carroll, Assistant Surgeon in the United States Army, which is included in the compilation referred to, the lecturer spoke in part as follows:—

Yellow fever, or yellow jack, as it is more familiarly called, is, so far as our knowledge goes, strictly an American plague or pestilence, and our earliest authentic accounts of this disease record its occurrence in the West Indies at the middle of the seventeenth century. Before the time of Sydenham, oriental plague, typhus fever, small-pox, cholera, pernicious malaria, and yellow fever were all called putrid or pestilential fevers. It was believed they were due to the same cause, and that they were transmitted through the atmosphere as visitations from God. At that time the science of medicine stood upon such a low plane that the best English physicians were just beginning to learn that there were differences between measles and small-pox, typhoid fever or typhus fever, and malaria, etc. Harvey had only recently announced the circulation of the blood, and Malpighi had followed him with a demonstration of the blood corpuscles in the smaller vessels (capillaries), uniting the arteries and veins. Peruvian bark, that blessing in malarial fevers, was barely known at the time when yellow fever first prevailed at Barbadoes, Jamaica, Santa Domingo, and Martinique, and later at Vera Cruz. In 1761 the disease was carried from Vera Cruz to Habana by the Spaniards, who lost 3,000 persons from it in that year alone, and in 1780, out of an army of 8,000, about 2,000 died of yellow fever within two months after landing

at Habana. It is further reported that in 1794 there were over 1,600 victims to yellow fever in the Spanish garrison and squadron at Habana. More recently, for the 10 years from 1870 to 1879, inclusive, 11,746 deaths are recorded for the city of Habana from yellow fever alone. Spain paid dearly for the Pearl of the Antilles in both men and treasure, for besides decimating her troops in Cuba, the disease followed them across the Atlantic and appeared in epidemic form in various cities of the Peninsula from time to time.

The female mosquito at certain periods in her existence experiences a physiologic need for blood. The hemoglobin of the blood seems necessary for the maturation of her ovums, and she will not deposit her eggs until she has obtained a meal of blood. The male insect cannot transmit yellow fever, because, having no need for it he never sucks blood, and while his proboscis will provide him with fruit juices it will not penetrate the animal skin.

The occurrence of a number of cases of the so-called "bilious remittent fever" of short duration should always excite suspicion, for such cases, when found in groups, are almost invariably cases of genuine yellow fever. At the present day nothing less than the absolute demonstration by an experienced observer of the presence in the blood of malarial parasites or spirillums would justify any other diagnosis than yellow fever; and even if they were shown to be cases of malarial or relapsing fever, modern scientific medicine requires that in the case of the former at least the patients should be rigidly protected against the bites of mosquitoes, since we know that malaria, like yellow fever, can be transmitted in no other way than through the bite of that insect, if we except experimental inoculation. In the case of relapsing fever, of the manner of transmission of which we know absolutely nothing, it would be wise to take the same precaution.

In 1897 the sensational announcement was made that Dr. Guiseppe Sanarelli, an Italian bacteriologist, working upon the island of Flores in Monte Video, had discovered the cause of yellow fever in a bacillus that he had found in about 50 per cent. of the patients examined by him. . . . It is amusing now to think of the fearful respect with which we handled the culture from Dr. Sanarelli's laboratory, because we were fully prepared to accept it as the cause of yellow fever from what we knew of Dr. Sanarelli's reputation as a bacteriologist. After several months it became apparent that this supposed yellow fever bacillus of Sanarelli was nothing more nor less than the common hog-cholera bacillus, an organism that was much better known in America than abroad.

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