

But undoubtedly the most important of all of these ultramicroscopic viruses, as far as man is concerned, is that of yellow fever.

It has this additional scientific interest that its demonstration has been of the most complete character and wonderful practical results have flowed from the careful study of the conditions of transmissiion.

Our present complete knowledge of yellow fever we owe to the late Major Reed, of the U.S. Army Medical Service, one of the most eminent and reliable of American Bacteriologists, and his associates—Carroll and Agramonte.

Yellow fever is a disease which has been studied with the greatest assiduity ever since the development of bacteriological methods, and many have been the bacteria which have been isolated and made responsible for its ravages.

One of the earliest investigators was Stenberg, and his work is a really wonderful monument to the value of negative evidence. For although he isolated an immense variety of bacteria from yellow fever patients he did not venture to connect any one of them specifically with the disease, and only risked calling attention to the more frequent occurrence of a certain form which he called *bacillus x*. It is not necessary to enumerate all the subsequent students of this subject, but some years ago Sanarelli, an Italian, trained at the Paris Pasteur Institute, went out to South America to study yellow fever, and came back with the announcement that he had at last discovered the cause in a form which he called *bacillus icterogenes*.

He was a tried and careful observer, and his work had the seal of the Pasteur Institute, and it was accepted by the majority of bacteriologists, so much so that we kept our cultures of *bacillus icterogenes* under lock and key for fear we should be responsible for the spread of the dreaded Yellow Jack.

However, doubts began to arise when Stenberg demonstrated that Sanarelli's bacillus was his *bacillus x*, and a little later Major Reed demonstrated that both the Sanarelli bacillus and *bacillus x* were simply varieties of the hog cholera bacillus.

With the discrediting of *bacillus icterogenes* the work had to begin all over again, and with the finish of the Spanish-American War Reed and his associates proceeded to Havana to study yellow fever in one of its endemic centres.

But they went with the accumulated results before them of a series of very important investigations into etiology and disease transmission, viz., with the results of Manson's and Ross's work in regard to the transmission of malaria by the mosquito. As early as 1881, however, a