

Editor's Note: The Mosquito-Malaria Theory

The understanding of the mode of transmission of malaria and the importance of the mosquito vector stands as a key milestone in the history of medicine as well as public health. In earlier times, physicians recognized variants of malaria by their fever patterns, e.g., tertian (recurrent fever with a three-day cycle), and as its name, first used by Torti in 1783, implies its cause was attributed to "bad air." Late nineteenth century medical investigators were impressed with the success of the new germ theories of disease and the spectacular successes in bacteriology, and it was not surprising that malaria was reformulated as an infectious disease at that time. However, even after the organism (the plasmodium) was identified in the blood of patients, its mode of transmission was unclear. Through the work of Grassi in Italy,

Ross in India, and Manson in England, the role of the mosquito vector was established in the late 1890s. Not only did these discoveries provide for better diagnosis and, ultimately, treatment, even more importantly, they provided the knowledge that was crucial for effect public health campaigns to control malaria. These two papers by Ross and Manson are complementary. Patrick Manson, generally acknowledged as the "father of tropical medicine," was the mentor to Ronald Ross, a young physician in the Indian Medical Service. Ross was awarded a Nobel Prize in 1902 for his work on malaria, but many historians believe much credit should also go to the Italian Giovanni Battista Grassi who discovered the transmission of malaria by mosquitos concurrently with Ross.