played by fleas in the dissemination of the infection, based his theory firmly on epidemiological, clinical and experimental facts, but, owing to Professor Nuttall's negative experiments, and to the unqualified statement made by Galli Valerio and others that fleas from rats will not bite human beings, it did not at once receive the favor it deserved. Indeed, the Indian Plague Commission stated that "Simond's proposition that suctorial insects play an important part in the transmission of plague from sick to healthy animals is so weak as to be hardly deserving of consideration." Now, however, chiefly owing to the careful experiments of the Plague Commission of the Advisory Committee for Plague Investigation in India, the rat-flea theory of plague has been proved beyond every possible doubt.

The rat-flea theory of plague does not only explain the peculiar seasonal incidence of the disease, but also its greater prevalence among the poor, the sudden loss of contagiousness at the end of the epidemic period, and every other epidemiological feature.

An important fact to which I must draw particular attention is the remarkable impunity with which a plague-infected rat may be handled as soon as deprived of its fleas. Laboratory experience has shown that plague rats are practically harmless, provided their juices are not inoculated into those who dissect them.

The role of the flea is paramount in plague epidemics, as it is in plague epizoötics. Therefore our preventive measures should be directed not only against rats, but also against fleas. The most efficient prophylactic measures employed by the ancients against the plague were those which affected more or less directly these insects. In a pamphlet on the plague published in Rome in 1743 we read that " in time of plague we should not suffer in our houses the slightest dirt, but keep them scrupulously clean on account of the grave danger that insects born of fiilth bring with them."

Every effort should be made to abolish fleas not only because of their great danger in time of plague, but because they may play an important part in the transmission of many of our more common diseases, not excluding tuberculosis in that form known by the name of scrofula, which is limited to the neck glands, and is so fearfully prevalent amongst the children of all poor districts.

On several occasions I have endeavored to draw attention to the part played by blood-sucking insects and other body—or household—vermin in the transmission of such diseases as measles, smallpox, typhus fever, scarlet fever, and mumps, our knowledge of which is far less complete than could be desired. With regard to one of these — typhus fever — several years ago I pointed out that its epidemiology showed unmistakably that it must be an insect-borne disease. My contention is now strongly supported by the discovery that Rocky Mountain fever, a form of typhus fever peculiar to the Western United States, is transmitted by a tick, and that in Africa a tick also is the carrier of the local form of relapsing fever, a disease which in Europe frequently co-exists with typhus fever, and is no doubt propagated by the same vermin—the body louse and the bed-bug.

The wonderful progress made within recent years in our knowledge of tropical diseases is based principally on the discovery that the causative agents of most of these diseases are spread by blood-sucking arthropods, that convey them from the sick to the healthy just as pollen is conveyed from flower to flower by pollinating insects. It was Manson who laid the foundations of modern scientific prophylaxis by discovering the exact role played by the mosquito in fostering and disseminating filariasis, a round-worm disease very widely distributed throughout tropical and subtropical countries.

The discovery of the role played by the mosquito in the transmission of filariasis led to the discovery of the agency of mosquitoes and other blood-sucking arthropods in propagating malaria, yellow fever, sleeping sickness, and other tropical diseases. It also led to the employment of far more efficient preventive measures directed against the disease carriers.

It is remarkable that, whilst so much progress has been achieved in the comparatively new field of tropical pathology, little or nothing has been attempted towards the elucidation of the many grave infectious diseases which decimate our own populations. Three years ago, whilst endeavoring to gain some information on the epidemiology of diphtheria, I turned to the reports of the British Local Government