the low-power microscope of his day to look for an animate causative agent of the disease, writing in 1658, says:

"Cats, dogs, pigeons, fowls, and the like dwelling within the precincts of an infected house, at the very first contact with the things infected take the contagiousness which breeds contagion; and even if, by a kind of contrariety of nature, they are not affected internally by it, they nevertheless do carry it into the neighboring houses and spread the plague they have caught throughout the city. Therefore, in time of plague the slaying and extermination of dogs and cats and suchlike domestic animals is prescribed. Examples beyond all count show how great is the danger from such animals when a house is stricken by plague."

The reality and gravity of this danger was so fully recognized in bygone days that from the remotest antiquity, both in the Levant and in Europe, on the outbreak of plague all cats and dogs were either shut up in cages or destroyed. In Palermo in the year 1576 upwards of 20,000 dogs were killed and buried within two days, and all cats, dogs, fowls, and pigeons were destroyed, not only in the town, but for a radius of four miles all round it. A like extermination of cats and dogs was enforced by the magistrates in Padua during the epidemic of 1630, and in Turin the year after. The Turin edict orders that, "having killed all cats, dogs, fowls, and pigeons, arsenic be prepared for the rats." In the same year, in Bologna, Cardinal Spada issued the following order:

"Seeing that dogs and cats easily contract the prevailing sickness and may infect persons and houses, His Eminence orders that these animals be either killed or placed under confinement, and he gives permission to any one to kill other people's dogs and cats found wandering about the town or entering other people's houses, and for every dog killed in the streets, provided the animal belong to others, the killer shall receive three *scudi*, the reward to be paid by the owner of the dog."

Also in England, on the outbreak of plague cats and dogs were destroyed. In the London epidemic of 1543 the plague order enjoins:—

"That all persons having any dogs in their house other than hounds, spaniels, or mastiffs necessary for the custody or safe keeping of their houses, should forthwith convey them out of the city or cause them to be killed and carried out of the city and burned at the common lay-stall, and that such as kept hounds, spaniels, or mastiffs should not suffer them to go abroad, but closely confine them."

Again, in 1665, we read in Hodge's "Loimologia":—

"That all occasion of propagating the Pest might be cut off; the Magistrates did not unadvisedly command Dogs, Cats, and likewise Pigeons, to be killed; Least, perchance, these animals wandering here and there, in all places, and birds flying about on all sides, should carry with them the pestilential seed, and become Conveyors of the Contagion."

At the present day the almost universal belief is that plague is conveyed by rat fleas from rat to man, and that, with the exception of the highly-contagious pneumonic cases, man plays no part in the spread of the disease. Basing myself on the history of numerous epidemics, on well-ascertained facts in the epidemiology of plague, and on analogies supplied by other diseases with a similarly wide zoological distribution such as tuberculosis, diphtheritis, smallpox and pneumonia. I hold that in epidemic plague transmission, from man to man is probably more frequent than transmission from rat to man.

We know that plague may prevail for months and even years among rats and other animals without extending to man, or only giving rise to a few sporadic cases; we have an example of it in Suffolk, England. But we also know that, given favorable conditions, such as suitable temperature and moisture, great overcrowding, and an abundance of fleas, a true epidemic may suddenly develop. Then, I believe, new factors come into play; the rat-strain of *Bacillus pestis* is replaced, in many cases, by a human strain, and the rat fleas are replaced by the fleas of man *(Pulex irritans)* and by those of the cat *(Ctenocephalus felis)* and dog *(Ctenocephalus canis)*, which attack man almost as frequently as the true human flea, so called. Indeed, in certain countries, as in Canada and the United States, for instance, the dog and cat fleas are the common fleas which infest houses, *Pulex irritans* being very rare. That these fleas are capable of inoculating the plague germ we already know from actual experiment.

Simond, who brilliantly exposed the part