

THE WARFARE AGAINST TUBERCULOSIS.

At the end of last year Professor Metchnikoff, of the Institut Pasteur in Paris, delivered in London the Lady Priestley Memorial Lecture for 1912, instituted by the National Health Society, on "The Warfare against Tubercle." The lecture, which was delivered in French and was a brilliant survey of the whole question, has now been translated into English by Sir Ray Lankester, K.C.B., F.R.S., and was published in a recent issue of *Bedrock*, a quarterly magazine published by Messrs. Constable & Co., Ltd., who secured it exclusively. They have now published it as a pamphlet, in which form it should be widely read. We commend it to the notice of nurses, who are taking an active and honourable part in the warfare against tuberculosis.

Discussing the former views as to the nature of tuberculosis, the lecturer showed that "whilst in countries in which medical science is cultivated the conviction existed that tuberculosis in its most important form, pulmonary phthisis, was a disease of the nutrition of the organism, in certain southern countries there was a persistent assertion that it was, on the contrary, a contagious malady, using that term in the same sense as that in which it is applied to infectious diseases properly so called. Thus it is that in the eighteenth century at Naples they were accustomed to burn things which had been used by tuberculous persons in consequence of the fear of contagion.

"Thus we find two currents of opinion. In the countries where tuberculosis is frequent, its contagious character is not admitted, whilst in the countries where this disease is rare, the population is firmly persuaded that the disease can be contracted easily by healthy persons coming into the neighbourhood of those affected by the disease."

THE BACILLUS OF TUBERCULOSIS.

It is now a matter of common knowledge that "it is to Robert Koch that we owe the discovery of the bacillus which bears his name, and is undoubtedly the agent which engenders tuberculosis.

"It is now thirty years since humanity learned for the first time of the existence of this bacillus, which is its most redoubtable enemy. Since then it has been studied from every point of view. We know minutely its construction, also its chemical constituents. It has been found to be clothed with a membrane impregnated with wax, which enables us to differen-

tiate the tubercular bacillus from its surroundings by staining it. . . . The discovery of Koch has become the basis of all our scientific and practical knowledge of tuberculosis. . . . The contagium is the *Bacillus tuberculosis*, and there is no longer any doubt of it. During the long years which have followed since this discovery the view has been firmly held that there exists in nature but a single "tubercle bacillus" capable of giving the disease to man and to a great number of other species of animals, among which there are several domesticated animals. But little by little, thanks to profound study of the matter, several species or races of tubercle bacilli have been distinguished."

It will be remembered what a profound sensation was made at the International Congress on Tuberculosis in London in 1901 when Professor Koch announced his belief "that the bacillus of tuberculosis of mammals, notably of cattle, presents so little danger for man that it is not worth while to take vigorous measures against its propagation, an incalculable number of investigations have been carried on in regard to the question thus raised. It has been established that the bovine bacillus, whilst far from being inoffensive for man, is, nevertheless, much less dangerous than the bacillus of human tuberculosis. . . . It is, then, man himself who must be considered as the principal source of this disease in his own race, a fact which does not render it unnecessary to take preventive measures against bovine tuberculosis and against the milk of tuberculous cows."

THE RESISTANCE OF THE BODY TO THE ATTACK OF KOCH'S BACILLUS.

A most interesting and lucid description is given of the way in which the human race has managed to preserve itself, although surrounded on all sides by the tubercle bacilli.

"In what does the resistance of the organs of men and of animals against the tubercle bacillus consist?"

"After having penetrated into the organism, this bacillus sets up, or provokes, an intense irritation on the part of the mobile cells. These surround it on all sides, imprison it, and hinder it in its growth. A regular fight is established between our greatest enemy, which is the bacillus of Koch, and the defenders of our body, the phagocytes. These, after having engulfed the bacilli, put all their powers into activity in order to destroy them. One of the means which they employ to attain this end consists in the fusion of certain numbers of the cells, their common action being more efficacious than that of each cell operating by itself.

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