prospects of the subjects of the remaining eleven chapters are similarly treated. It is sufficient here to say that these chapters are concerned with the passing of the Coal Age and the possible uses of other sources of energy; achievements of synthetic chemistry; the creation of living organisms; cell structure in relation to processes of organic evolution; Alexis Carrel's work on tissue culture and the uses of Lindbergh's perfusion pump; transient man and his reactions; lightning and other high-tension discharges; mechanical aspects of the attainment of speed (H. E. Wimperis's British Association address on "The Future of Flying", at Dundee last August, could have provided some striking points for this chapter); internal mechanism of the *Queen Mary*; the calling up of personalities of the past or present through radio and television and the preservation of sense impressions; and the relationships of science to social evolution.

Dr. Kaempffert's main aim has been to present important aspects of scientific work and thought

to an intelligent public; and to suggest some of their social consequences or implications. In his forecasts of events or possibilities which will influence the future of the earth and mankind, he rarely goes beyond what some scientific men themselves have fancied may happen; and he cannot, therefore, be accused of ministering to scientific sensationalism. Almost every one of his chapters provides the basic material for an imaginative scientific fantasy or romance; and Mr. H. G. Wells, the master of such literature, has already exercised his genius in the production of many absorbing stories of this type. Dr. Kaempffert may be said to occupy a place between the purely descriptive writer, who is making scientific knowledge interesting and intelligible to general readers, and the man of letters, who occasionally lets his mind play upon the potentialities of discoveries made in scientific fields. His work is an excellent example of what can be done to educate the public in the spirit of science and the human meaning of the results achieved.

R. A. GREGORY.

THE LOUSE AND LOUSE-BORN DISEASES

The Louse

An Account of the Lice which Infest Man, their Medical Importance and Control. By Prof. Patrick A. Buxton. Pp. ix+115. (London: Edward Arnold and Co., 1939.) 7s. 6d. net.

THE louse of man, *Pediculus humanus*, is concerned with the transmission of the micro-organisms of at least three of his diseases. From the medical point of view, therefore, it is a creature of importance and especially during periods of war. The most virulent of these diseases is epidemic typhus which, in Europe, occurs in the U.S.S.R., the Balkans and many parts of the Mediterranean region. In recent years it has steadily receded and disappeared not only from England and Wales but also from western Europe. It is noteworthy that it did not break out on the Western Front during 1914-18, notwithstanding the virulent epidemics that prevailed in Serbia during that period. The second louse-borne disease is trench fever which, it will be recollected, was so prevalent in the armies of the Great War. Yet, when that calamity ended, the disease vanished from western Europe while the louse still remains. Relapsing fever is the third louse-borne malady and is widely distributed in eastern Europe, where epidemics prevailed during the years 1914-18.

In the present crisis the louse problem is likely to force itself once more into prominence. We

need to go beyond existing empirical methods of delousing: to deter infestation is a possibility of prime significance. The disappearance of trench fever at the end of the War of 1914-18 stopped further inquiry. Whether infection is solely by means of the entry of the virus, in the dried faeces of the louse, through scratches or abrasions, or perhaps via the conjunctiva and respiratory tracts also, needs renewed inquiry. The curious feature seems to be that *Pediculus* does not generally convey any of the three diseases named by means of its blood-sucking mouthparts. It is evident that while knowledge of the louse and its economy has greatly increased during and since the War of 1914-18, certain essential information still remains a desideratum.

Dr. P. A. Buxton in his handbook has given an accurate and concise summary of our present knowledge of both *Pediculus* and *Phthirus* together with methods for their control. Originally written as part of a larger work on medical entomology, which is in preparation, the importance of the subject in civil and military life at the present time led the author to publish this section in advance. The army medical officer, in particular, should have this convenient little manual available, since it provides a clear exposition of aspects of the subject likely to be overlooked and indicates where further inquiry is needed.

A. D. IMMS.