

encountered amongst pathogenic bacteria. The word "transmutation" is employed by the author to indicate the transformation of members of one recognised species into those of another, and he refers in detail to the arbitrary methods hitherto employed by bacteriologists for the differentiation of bacterial species. Apart from two or three pages in which the author's own experimental work is briefly described, the book is mainly a study of bacteriological literature in the English language. A large part of the abundant publications in foreign languages is either not dealt with at all, or is analysed from English abstracts. There is a good deal of reiteration, certain observations, often obsolete, being utilised again and again in different parts of the book. The use of the apostrophe in "Aertryck's bacillus" seems to indicate that the name is that of a man instead of that of a place. The last chapter, entitled "The Enzyme Theory of Disease," deals with the idea that most of the attributes of pathogenic bacteria can be referred to the activities of ultra-microscopic bodies of the nature of enzymes, and the author considers that this may be the means by which bacteria may exchange many of their characters and functions without themselves undergoing transformation.

*The Examination of Materials by X-rays. A General Discussion held by the Faraday Society and the Röntgen Society, Tuesday, April 29, 1919. Pp. 88+64. (Reprinted from the Transactions of the Faraday Society, vol. xv., part 2, 1919.) (London: Faraday Society, 1919.) Price 13s. 6d.*

THE Faraday and Röntgen Societies did good work when they held a joint meeting in April last year and thrashed out the position as regards the achievements, possibilities, and limitations of the method of the examination of materials by X-rays. The present volume will form a most useful jumping-off point for the investigator or manufacturer who desires to know what had been achieved in industrial radiology up to 1919. The contributors to this "symposium number" include many of the leading radiographers in this country who have not confined their interests to medical radiology. Not all the noteworthy work achieved during and since the war was, however, available for publication when the discussion was held.

The first paper, by Prof. W. H. Bragg, forms a delightful introduction to the subsequent papers and discussions, which deal with such varied subjects as steel, light alloys, aircraft timber, carbon electrodes, X-ray plates, etc. There are many excellent reproductions of radiographs.

One realises, from a close reading of the volume, that we stand only on the threshold of radiology, and big and unexpected developments are probable during the next ten years. Both the Röntgen and Faraday Societies are to be congratulated on the results of the meeting. We understand the volume is procurable from the secretary of either society.

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*Commercial Oils: Vegetable and Animal. With Special Reference to Oriental Oils. By I. F. Laucks. Pp. viii+138. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1919.) Price 6s. net.*

THIS is a handy little book, intended, not for the oil chemist, but for those persons concerned in the oil industry who have no knowledge of chemistry, or at least no knowledge of it as applied to oils. There are no doubt many such who will often desire to understand what is meant by the various analytical tests and terms used in the specifications on which large users of oil base their contracts of purchase. For example, on p. 70 of the book there is a specification for oil to be employed as a lubricant for aircraft engines; this stipulates that the oil must have (*inter alia*) a certain iodine number, saponification value, flash point, and so on. The author describes in simple terms what these and similar phrases mean, and how they are employed as criteria of the purity and quality of the oil. He gives also short descriptions of the principal oils and fats met with in commerce, and has some very useful advice to offer on methods of taking samples. Even the expert may peruse this part of the volume with advantage, and the non-technical reader should at least have an intelligent idea of the whole subject after studying Mr. Laucks's book.

*The Birds of the British Isles and their Eggs. By T. A. Coward. First series. Comprising Families Corvidæ to Sulidæ. Pp. vii+376+159 plates. (London and New York: Frederick Warne and Co., Ltd., 1919.) Price 12s. 6d. net.*

THIS volume of "The Wayside and Woodland Series" of handy pocket-guides affords a popular account of our British birds. Such a work, especially if embellished with good coloured plates of the various species and their eggs, and accompanied by trustworthy letterpress, has long been a desideratum. The figures of the birds are reproductions, much reduced in size, of those in the late Lord Lilford's much-prized book. They are 159 in number, and most of them are decidedly good; but others are disappointing from the fact that the three-colour process has not been equal to doing them justice. The figures of the eggs, which are from one of the editions of Hewitson's well-known book, are disappointing for the same reason, and will mislead the tyro who attempts by their aid to name many of his specimens. There is also an acceptable series of black-and-white illustrations devoted to nests, etc.

Mr. Coward's letterpress, as one would expect, is good, but it is questionable if his excellent descriptions of habits have not been awarded too much space at the expense of other sections, among them the British distribution of the more or less local species. Given a knowledge of the bird and where it is likely to be found, its various activities may be observed by those who care to devote their attention to the delights of bird-watching. This neat and useful little volume—the first of the series on birds—will, no doubt, be