

geology—is, moreover, little short of ludicrous. What, for instance, are we to say of a writer who describes the rocks of the Himalaya as Archæan, although he does qualify this by stating later on that a band of Cretaceous (which is incorrect) and Tertiary rocks skirts the foot of the range? The reference to the Mesozoic rocks of the peninsula is also misleading, and we should like to know what “similar scenery in Europe” is recalled by the traps of the Ghats. A few coloured plates of more or less characteristic Indian mammals and birds relieve the necessarily dry details of the work, but it would have been better if the author had made up his mind what name to employ for the Indian antelope, instead of calling it *Antelope* (in error, by the way, for *Antilope*) *bezoartica* on p. 12 and *A. cervicapra* on the plate. When a future edition of this otherwise excellent little work is called for it may be hoped that the introductory chapter will be re-written with the aid of some one who has at least a smattering of elementary information with regard to the geology and zoological products of the country.

R. L.

OUR BOOK SHELF.

Bacteriology and the Public Health. By Dr. George Newman. Third edition. Pp. xx+497. (London: John Murray, 1904.) Price 21s. net.

DR. GEORGE NEWMAN is well known as a public health expert and bacteriologist, and his contributions to the literature of preventive medicine have attracted considerable attention both in this country and abroad. The present volume may be regarded as an elaboration of his previous writings, and is, in most respects, thoroughly up to date.

There are thirteen chapters, dealing with subjects as follows:—the biology of bacteria, bacteria in water, bacteria in the air, bacteria and fermentation, bacteria in the soil, the bacteriology of sewage and the bacterial treatment of sewage, bacteria in milk and milk products, bacteria in other foods, bacteria in disease, tuberculosis as a type of bacterial disease, the etiology of tropical diseases, the question of immunity and antitoxins, and disinfection. There is also an appendix on technique and a welcome index.

The chapters dealing with some of the pressing administrative problems of the day are specially worthy of commendation.

The chapter on bacteria in milk is an admirable dissertation, and the author deserves much credit for his judicious handling of a mass of conflicting opinion and apparently irreconcilable facts. For the benefit of those who regard the bacterial diseases of animals, some of which are preventable, as of little economic importance, the following quotations (p. 324, p. 319, p. 203, p. 204) may be given:—

“In 1903 there were in Great Britain as many as 1463 outbreaks of glanders in which 2490 horses were attacked. This is the highest number of outbreaks since 1892, when they numbered 1657. The prevalence of this disease is localised often to certain counties and districts. In 1903, 855 of the 1463 outbreaks occurred in the county of London.”

“In 1903 there were 761 outbreaks of anthrax in Great Britain, in which 1127 animals were attacked. This is the largest return recorded since the passing of the Anthrax Order in 1886.”

“It is a well known fact that tuberculosis is a common disease of cattle. Probably not less than 20

to 30 per cent. of milch cows in this country are affected with it.”

“In the United Kingdom in 1901 there were 4,102,000 milch cows. If we take 2 per cent. of these as having tuberculous udders, it gives us 80,000. The average annual yield of milk per cow may be taken as, at least, 400 gallons, which means that from these 80,000 tuberculous udders 32,000,000 gallons of milk are obtained.”

It is perhaps unnecessary to add that glanders, anthrax, and tuberculosis afflict man as well as the lower animals.

The book, judged as a whole, is a most valuable contribution to the literature of preventive medicine. It will prove most useful to medical officers of health, medical men, bacteriologists, veterinary surgeons, trade experts, and many others. The lay reader will find it replete with information, and written in a lucid and agreeable style.

In a sense, the present volume is a later edition of “Bacteria,” which was noticed by the present writer in these columns in 1899; but the new publication is amplified and improved to such an extent as fully to merit this second notice.

A. C. HOUSTON.

Die bisherige Tätigkeit der Physikalisch-technischen Reichsanstalt. (Brunswick: Vieweg and Son, 1904.)

Die Tätigkeit der Physikalisch-technischen Reichsanstalt im Jahre 1903. (Berlin: Springer, 1904.)

In these publications is given an interesting account of the progress of the Reichsanstalt from its foundation in 1887 to the present time. From the first pamphlet by the president, Dr. Kohlrausch, we find that the total number of instruments tested up to the end of 1903 was 290,000, an average of nearly 20,000 a year. If, however, we deduct from this the number of clinical thermometers and of safety fusible plugs for boilers, the aggregate is reduced to 50,000, or an average total of about 2800 a year for all other instruments. Against this figure we may compare the totals taken from the report of the National Physical Laboratory for 1903, from which it appears that the aggregate for the year for instruments and tests of all kinds was 30,817, or, excluding clinical thermometers, 11,424.

An interesting recent development of the Reichsanstalt is the opening at various towns throughout Germany of five branch stations, where electro-technical instruments can be verified. The report concludes with a long list of the recent original papers published by the members of the staff.

It is not possible to give in the space here available anything like an insight into the manifold contents of the second publication—the report of the Reichsanstalt for the year 1903. The researches mentioned include the expansion of water between 0° C. and 100° C., and of numerous materials from liquid air temperatures upwards, the laws of radiation, light units, and magnetic permeability. Full details are given as to the numerous instruments tested.

J. A. H.

The Principles of Inorganic Chemistry. By Wilhelm Ostwald. Translated by Dr. Alexander Findlay. Second edition. Pp. xxxi+799. (Macmillan and Co., Ltd., 1904.) 18s. net.

THE best proof of the excellence of this work and its appreciation by English-speaking students is that a new edition has been found necessary after such a comparatively short time as two and a half years. The work, unlike many text-books on chemistry, forms interesting reading, and this is greatly caused