

## REVIEWS.

---

THE MICROORGANISMS OF THE HUMAN MOUTH. By WILLOUGHBY D. MILLEN, D.D.S., M.D. Pp. 364, with 130 illustrations, including Photomicrographic Plates. Philadelphia: The S. S. White Manufacturing Company, 1890.

THE publication of this remarkable record of experimentation and research cannot fail to meet with a most hearty welcome from practitioners of medicine, while the dental specialist will hail it as the most valuable of all recent contributions to dental science.

Previous to the publication of Professor Miller's investigations the presence of microorganisms in carious teeth was fully recognized, and that they might be found to be important factors in the decalcifying process often suspected; but the credit of fully demonstrating the correctness of what, previous to his investigations, was but mere conjecture, belongs entirely to Professor Miller. Objections have been made to his deductions on the ground that he has not entirely solved the problem of dental caries, that he throws but little additional light upon predisposing causes; but while Professor Miller has been able to demonstrate the fact that all microorganisms of the oral cavity which possess the power of exciting an acid fermentation of foods may, and do, take part in producing the first stage of caries, and also that all possessing a peptonizing or digestive action upon albuminous substances may take part in the second stage; and finally, that those possessing both properties at the same time may take part in the production of both stages, he has by no means ignored the predisposing causes of caries. In Chapter VIII, under the general heading of "Etiology of Dental Decay," the subject is very fully considered. In the pathology of the teeth it is not in every case easy to draw definitely the line between predisposing and exciting causes. This is clearly illustrated in the case of the third molars, the so-called wisdom teeth, which are generally believed to be predisposed to caries, even in mouths where the more anterior teeth are of good quality. In these third molars decalcification almost invariably appears on their buccal surfaces, as well as in the depressions of the crowns; but these teeth are, in consequence of their positions, beyond the sweep of the tooth-brush, and not usually brought into full service in mastication, hence they are nearly always covered with particles of amylaceous substances, which, remaining from day to day, undergo fermentation, and solution of the softened residue soon follows. Professor Miller very clearly shows that while the conditions which are usually considered as predisposing causes invite decay, they do not produce it, and that if the active agents are kept away decay cannot occur, no matter how inferior in quality the teeth are.

In "Microorganisms of the Human Mouth" Professor Miller very con-

cisely outlines the morphology and biology of bacteria. He describes the nutrient media for them as found in the oral cavity, their development, and the part they play as excitants of fermentation, together with the action of the products of fermentation on the different structures of the mouth.

Under the head of "Prophylaxis of Dental Decay" is found much valuable information relative to the use of antiseptics in the prophylactic treatment of decay, the antiseptic action of filling materials, and the sterilization of teeth for the purpose of implantation.

Valuable data, the result of a great number of experiments and much research, are given in Chapter X., under the head of "The Pathogenic Mouth Bacteria, and the Diseases which They Produce"; also in Chapter XI., "Entrance-ports of Pathogenic Mouth Bacteria," together with a record of a series of careful experiments in the study of *Pyorrhœa alveolaris*, the infections resulting from accumulations of the excitants of diphtheria, syphilis, typhus, etc., in the oral cavity.

The tables showing the relative efficacy of the different antiseptic agents, and the comparative acidifying power of different articles of food, add much to the value of the work as a text-book of dental histology. Indeed, it may truly be said that in that capacity it will for a long time remain without a rival.

The general make-up of the book is all that could be desired. The illustrations are distinct and accurate, and the publishers are entitled to much credit for the excellent manner in which their part in the production of the work has been performed.

Now that histology has become a requirement in some of the dental schools, Professor Miller's work must quickly become indispensable to students as a text-book, nor can the practitioner of dentistry afford to be without it, and the non-professional reader also might derive much advantage from its study.

C. J. E.

**DISEASES OF THE NOSE AND ITS ACCESSORY CAVITIES.** By W. SPENCER WATSON, F.R.C.S. Eng., B.M. Lond., Surgeon to the Throat Department of the Great Northern Central Hospital; Senior Surgeon to the Royal South London Ophthalmic Hospital; formerly Assistant-Surgeon to King's College Hospital; Fellow of the Royal Medical and Chirurgical Society; Member of the Ophthalmological Society of Great Britain and Ireland; Member of the West London Medical and Chirurgical Society, etc. WITH SPECIAL SECTIONS ON DISEASES OF THE SKIN OF THE NOSE, ON INJURIES, ON RHINOPLASTIC OPERATIONS, AND ON EAR AFFECTIONS IN THEIR RELATION TO INTRA-NASAL DISEASES. By DR. ROBERT LIVEING, MR. WILLIAM ADAMS, and MR. A. E. CUMBERBATCH. Second edition, with numerous engravings and lithographic plates. 8vo., pp. 318. London: H. K. Lewis, 1890.

IF our recollection of the first edition of this work serves us correctly, that volume, for its date, was a far more valuable exponent of its subject than the present one seems to be. Some portions are much more thorough, practical, and representative of progress than others. This in-