Book Reviews

A Text-book of Dental Histology and Embryology, Frederick B. Noyes, Isaac Schour, and Harold J. Noyes. Philadelphia, Lea & Febiger, 1938. 445 pp., 284 illustrations, 15 plates. Price $6.50.

After an interval of nine years, another edition (the fifth) of Dr. Frederick B. Noyes' *Dental Histology and Embryology* has appeared, this time the result of the author's collaboration with Drs. Isaac Schour anad Harold J. Noyes. This book is complete and up-to-date and covers the entire field of oral and dental histology, including enough embryology, physiology, pathology, and comparative dental anatomy to furnish the background. A great number of items have been added to this edition which were the result of research and study made during the past ten or fifteen years. Among these subjects are, for instance, the primary and secondary enamel cuticle, the epithelial attachment to the enamel, the role of Korff's fibers in the dentin formation, functional changes in the periodontal membrane, and many other similar, new concepts. An innovation is the chapter devoted entirely to a detailed discussion of the structure of the deciduous teeth, which subject has heretofore always played the role of a stepchild in dental histology and anatomy. The thickness of the enamel and dentin of the deciduous teeth, the width of the pulp chambers, the direction of the enamel rods, and many other important points of information are taken up in detail.

In the discussion of the calcification of the human permanent teeth, the old data of Legros and Magitot have been eliminated, and the findings of recent investigations have been extensively reviewed. The chapters on the postnatal development of the face and oral cavity are excellent; the detailed discussion of the growth changes, of the deciduous, mixed, and permanent dentition, and of eruption will be of great importance to orthodontists and to those interested in dentistry for children. The inclusion of some of Dr. Broadbent's cephalometric radiographs and diagrams is a valuable addition to the usual illustrations of growth changes.

At the end of most chapters is a subheading, "Histophysiological Remarks." Under this caption are included a variety of considerations which, although they may not, strictly speaking, belong to the field of histology, are of utmost biological and clinical importance. Among these subjects are: distinction between young and adult enamel; disturbances of calcium metabolism as manifested in the dentin; age changes and calcifications of the pulp; resorption, repair, and hyperplasia of the cementum; bone repair; and many similar problems. Considerable space is given here to the recent work of Schour on growth rate, incremental pattern, neonatal disturbances, and his experimental work with fluorine and alizarine.

The part on laboratory exercises is modified to comply more closely to the subject matter in the Curriculum Survey Report of the American Association of Dental Schools.

One slight criticism that might be made of the book is the continued use of some obsolete terms and photographs. The term "gingivus," for instance, is still found in some places, whereas otherwise the correct term, "gingiva," is used throughout the book. The illustrations of sheep tissues (especially Figs. 137-139), although important in the early days of dental histology, are no longer adequate to show such structures as the epithelial rests, which in sheep are different than in man. Some of the older illustrations, however, such as Figs. 226-232, are excellent, and it would be hard to replace them by equally good new ones.

The question arises as to what place the new edition of Noyes' Histology will occupy in the field of dental science and education. It appears that under the present set-up, dental schools can be roughly divided into two groups: those which include a great deal of general histology and embryology of the head, face, and oral cavity in their course in dental histology, and those which restrict the course to the teeth proper and relegate the other structures to anatomy, embryology, general histology, and similar courses. To the former group this new book offers all they could desire. To the practitioner it presents a fount of valuable and necessary information and plentiful stimulation for study and thought.

RUDOLF KRONFELD

Presentation of the Plate and Accessories in the Treatment of Malocclusion

DR. A. MARTIN SCHWARZ
Vienna

Translated from Deutsche Zahn-Mund-und Kieferheilkunde, Bd. 5—1938, Heft 3—by Dr. Arthur Rhode

Schwarz opens his paper with the remark that now that the fixed appliance has been brought to such a high degree of perfection, and at the same time been made economical through the use of steel, it seems strange that the plate, one of the oldest regulating devices, should be returning to favor. He quotes Nord as saying that it will be the appliance of the future, and states that he uses it in four-fifths of his problems.

Various types of malocclusions are shown, including those requiring bilateral expansion, posterior movement of one or both buccal segments, jumping of the bite, rotations, and individual bodily movements. Together with these are shown the appliance used and the results obtained.

The plate itself is of the usual vulcanite variety, split in various ways, depending on the task at hand. The parts are connected by a telescoping tube that is adjustable by a thread and key. Thus for bilateral expansion the plate is split longitudinally; for advancement of the anterior segment, together with expansion, it is split in the manner of a Y. For these cases, where a buccal segment is to be moved distally, the plate is split so that the segment to be moved is controlled by a portion of the plate that is independent except for the screw locks.

The teeth themselves are under the control of a crib of stainless steel wire, the proximal ends of which are embedded in the plate. The wire is formed in such a manner, however, that it presents bends of arrowhead design that engage interproximally from without and finger springs from within. In this manner individual or mass movements may be executed. Bodily movements can be accomplished only with bands carrying vertical tubes into which bent loops of wire can be shipped.

Schwarz claims that the palate offers so much more resistance than the teeth alone that it is now possible to accomplish tooth movements formerly considered impossible. The lingual surface of the lower alveolar arch, although considerably less tough than the palate, also is capable of carrying quite a load of additional anchorage.

ALLAN BRODIE