

**DESCRIPTIVE
ANATOMY OF THE
HUMAN TEETH**

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Descriptive Anatomy of the Human Teeth by G. V. Black

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Descriptive Anatomy

OF THE

Human Teeth

FOURTH EDITION

BY

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PHILADELPHIA, PA.

THE S. S. WHITE DENTAL MANUFACTURING CO.

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PREFACE TO THE FIRST EDITION.

BY my experience as a practitioner, as a teacher, and in my intercourse with fellow-practitioners, I have become convinced of a serious defect in the teaching of the details of the anatomy of the teeth, and in the systematization of the terms used in their description. This defect has been a constant drawback at the chair, in the laboratory, and most of all, in the college. The object of the present volume is to remedy, in a measure, this defect. To this end I have had constantly in view the needs of the dental student and practitioner.

We have heretofore had excellent general descriptions in human and comparative dental anatomy; but these have dealt principally with the general forms of the dentitions of the mammalia and other orders of animate beings, rather than with specific descriptions of the forms of the various surfaces and surface markings, making up the sum of the forms of the individual teeth of man. Valuable as these works have been, they have left the acquirement of a knowledge of the details of the specific forms of the human teeth mostly to individual observation. By this means, many have attained to an excellent perception of the various forms of the human teeth; but it is not reasonable to suppose the profession generally will do this without some fixed guide. What the dental student wants most in the college, and in the office, is a systematized nomenclature of the several parts of the teeth in detail; and such a description as will call his attention successively to every part of each tooth, as Gray, in his *Anatomy*, has called attention to every part of each bone, however apparently unimportant. It should be remembered that anatomy is not to be learned from books alone, but also by bringing the parts to be studied into view, and closely examining them in connection with the

descriptions given. Anyone who may read the present volume without a reasonable number of human teeth of each denomination before him for examination and comparison, will be but partially benefited.

It has been my object to systematize the nomenclature most in vogue with the profession, whenever practical, rather than to introduce new terms. However, the reader will find a few new terms, and possibly a few old ones that are used differently from the former custom. The terms up and down, to indicate direction or parts of teeth, are abandoned, because of their ambiguity. In a few instances, new forms of old words have been used, especially to avoid the terms inner, outer, backward, forward, etc., which are so often misleading. The words mesial, distal, labial, buccal, lingual, etc., are used as adverbs of direction by adding *ly*, or the same thing is accomplished by the use of the preposition *to*. It is as easy to say of a cavity that it extends far beyond, beyond, to, nearly to, or to the gingival line, as to say it extends up or down, etc., and the meaning will not be mistaken; or to say that a cavity extends distally, or to the distal, or lingually, or to the lingual, instead of backward, or inward, either of which has different meanings in different situations. The best rule is to use no extraneous object in the designation of the parts of, or direction on, the surface of a tooth; but to confine the phraseology to the specific and well-defined terms applied to its several parts. The back part of a molar would not mean the same relative part as the back part of an incisor. In many such ways the author has endeavored to systematize, and make more definite, the phraseology applied to the teeth without going to extremes, knowing well that forms of language once in use can be improved more easily than they can be displaced by new terms, though more exact.

The absence of a Bibliography may be noted. The plan and object of this work has not seemed to call for many references to authorities. This does not imply, however, that authors who have preceded me, as Fox, Carabelli, Tomes,

Wedl, Judd, Wortman, and many others, to whom we are greatly indebted, have been either overlooked or ignored.

The illustrations have all been made by the author for the purpose of illustration, rather than as works of art. After experimenting with the various plans of the management of light and shade, diffused light has been used because more detail could be shown, especially in the difficult task of illustrating the occlusal surfaces of the teeth. Each picture of a tooth, in all its details, is drawn from accurate measurements of the particular tooth in hand.

Much of dental histology might properly find place in this book; but that subject is well represented by others. Malforms of the teeth, supernumerary teeth, and variations of arrangement, belong to the subject of irregularities, which is amply treated by several authors. My aim has been to confine the book strictly to normal macroscopic anatomy. However, a very serious difficulty, which has always met the dental anatomist, has been the variations of form in teeth of the same denomination. The endeavor has been to systematize these under one, two or more typical forms of each tooth, or its lobes, and point to the character of the changes which occur. This has occasionally led to the mention of abnormal forms.

The reader will find scattered through the work some hints with regard to the practical bearing of anatomical points on operative procedures, which, it is hoped, will be of value.

PREFACE TO THE SECOND EDITION.

THE rapid sale of the first edition of this work has shown an appreciation of a need for a more complete anatomical description of the human teeth. In preparing the work for a second edition, the aim has been to render the original design more complete in its details, and to make such verbal alterations as would better fit it for the text-book for the college, and for reference by the practitioner. The most notable changes are in the section on nomenclature; and these are confined to additional explanations of words and phrases. For the convenience of students a brief glossary has been added.

A number of the illustrations have been redrawn, and one has been added. Some of the numbers of the illustrations have been changed to render them consecutive; but the numbering of the paragraphs remains unchanged. Important words, especially the subjects of paragraphs and technical words the first time used, have been printed in bold-faced type. This, it is hoped, will be of advantage to the student and especially convenient for reference.

Valuable aid in the preparation of the work for reissue has been rendered by Mr. I. W. Davenport, Drs. D. M. Cattell, Edmund Noyes, and C. N. Johnson. G. V. B.

JACKSONVILLE, ILL., July 15th, 1891.

PREFACE TO THE THIRD EDITION.

THE continued favor with which this work is received by the profession has made another edition necessary. In preparing this the endeavor has been to improve the detail without changing the form. The principal changes will be found in the nomenclature. The steady progress of dental nomenclature toward more exact forms demands this. It must now be recognized that we have two distinct forms of dental nomenclature, the one used in comparative dental anatomy, the other in human dental anatomy for the purposes of dentistry. The one is adapted to the description of the teeth of the various animals, including the teeth of man when his teeth are treated of in the comparative sense; the other is suited to the teeth of man when the more exact and detailed descriptions necessary to operative dentistry are presented. These word-forms necessarily become the basis of much of the nomenclature of operative dentistry. An extended examination of dental literature shows that up to a recent period, writers on operative dentistry had named more than twice as many points on the teeth than had writers on dental anatomy. This fact shows the necessity that had existed for the more extended and systematized presentation of the subject of dental anatomy, and the closer systematization of its nomenclature. However, the reader will find the changes introduced limited to one new word, *axial*; two new word-forms, *occlusal* in place of *occluding*, and *incisal* in compound forms, and the completion of the systematization of the names of the angles of the teeth. This latter has required but few word changes in the text.

Improvement has also been made in some of the descriptions, and a number of new illustrations have been added.

G. V. B.

JACKSONVILLE, ILL., August 21st, 1894.