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A TEXTBOOK OF  
**PATHOLOGY**  
GENERAL AND SPECIAL

FOR THE USE OF  
STUDENTS AND PRACTITIONERS

BY

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A TEXTBOOK OF  
**PATHOLOGY**  
GENERAL AND SPECIAL



TO  
THE MEMORY OF  
WILLIAM SMITH GREENFIELD

M.D., F.R.C.P., L. AND E.,  
FOR THIRTY-ONE YEARS PROFESSOR OF PATHOLOGY  
IN THE UNIVERSITY OF EDINBURGH, OUR  
TEACHER, "CHIEF," AND FRIEND,  
WHO DIED AUGUST 12, 1919,  
WE RESPECTFULLY AND  
AFFECTIONATELY  
DEDICATE THIS  
BOOK

## PREFACE TO SECOND AND THIRD EDITIONS

THE second edition of this volume was long overdue, and its appearance delayed by the many pre-occupations of the authors, including their service with the Royal Army Medical Corps during the War. In some ways, this was not without benefit to the work, as they were thus enabled to incorporate much of the new and valuable experience gained during and after the War by themselves and others.

The whole has been largely rewritten; and new matter of importance has been added, *e.g.* the chapter on Fever. As in the first edition, free use has been made of the published work of others, and, wherever possible, suitable acknowledgement of such sources has been made. We are specially indebted to Dr. John Milroy, of Queen's College, Belfast, for the thorough revision of the sections dealing with Chemistry, physiological and pathological: to Professor Ernest Glynn, of Liverpool University, for notes on the Pathology of the Suprarenal Glands: and to Dr. James Dawson, Royal College of Physicians' Laboratory, Edinburgh, for permission to use the beautiful illustrations of his Gold Medal Thesis on Inflammation. Mr. Richard Muir, of the Pathological Department, Edinburgh University, has again given us his invaluable help with the photo-micrographic and coloured illustrations; whilst the naked-eye photographs are almost entirely the work of one of the authors (W.E.C.D.). Many friends have helped us with proof-reading, and, in this connection, Professor Beattie wishes especially to thank Miss Thirza Redman, M.Sc. (Lond.), one of his assistants: and Dr. Carnegie Dickson gratefully acknowledges the help of Dr. J. Browning Alexander and Dr. F. W. Hamilton, and of his assistants, Miss M. Irene Wilson and Mr. Arthur Griffin.

For the third edition, as a matter of convenience, the two original volumes, General and Special, have now been published both separately and also incorporated into a single volume, and certain minor alterations and additions made to bring the work up to date.

Since the appearance of the first edition of this work, we have to record with deep regret the passing of him to whom it is dedicated, our old teacher, "chief," and friend, William Smith Greenfield, whose name will live as one of the great British Pathologists—perhaps, indeed, the father of modern British Pathology.

J. M. B.  
W. E. C. D.

August 1921  
and  
March 1925.

## PREFACE TO FIRST EDITION

IF any excuse were necessary for adding another to the many textbooks of Pathology, it would be found in the fact that the present volume is based on the teaching of the Edinburgh school. This school, in which the first chair of Pathology in the United Kingdom was founded, has sent its teachers and students to all parts of the world, and thus of necessity has had a considerable influence in moulding pathological opinion. In spite of this, some fundamental points which have been taught in Edinburgh for years, and which are founded on careful experimental investigations, combined with a very extensive experience in human morbid anatomy and morbid histology, have not, we think, received sufficient attention. To mention only two points—on infarction much is yet taught which is quite in opposition to experimental investigations; and the relation between certain diseases of the kidney and arterial degeneration seems to be very imperfectly understood.

The book is intended primarily as a textbook for medical students and practitioners, and we have, therefore, dealt fully with the more important and fundamental points in Pathology, and have either omitted altogether or dealt very briefly with rare and unimportant conditions. Minute microscopic anatomy of abnormal structures and tissues has been dealt with—though sometimes briefly, for we fully recognise that no descriptive writing can be substituted for the actual specimen and the microscope, and, moreover, the subject is fully dealt with in textbooks on Morbid Anatomy and Histology. In dealing with animal parasites, much of the minute morphology has been omitted. Bacteriology is so well dealt with in the many excellent textbooks now published, that, important as it is to, and inseparable though it be from, Pathology, we have omitted it altogether as a separate subject.

We have especially to thank our old teacher and chief—Professor Greenfield, of Edinburgh University—for placing the notes of his lectures at our disposal. At his suggestion the work was undertaken, and without his hearty co-operation and the benefits of his wide experience it would have been impossible for us to undertake it. To acknowledge his help is to us a pleasure, but it is, perhaps, even a greater pleasure to have the opportunity of again bringing forward views founded on the results of careful observation and experiment, which he has previously published and taught for many years, but which have not received the attention and recognition which they merit.

The compilation of a complete bibliography has not been attempted, though reference has been made to some of the more important papers consulted. We have made free use of the standard textbooks on pathology and medicine, and would specially acknowledge our indebtedness to the papers on "Inflammation," by Professor Adami; on "Protozoa," by Professor Minchin; and on "Parasitic Worms," by Manson and Shipley, in the "System of Medicine," by Allbutt and Rolleston; and also to Max Braun's "Animal Parasites of Man."

Almost all the illustrations are new, and are from specimens either specially prepared by or for us, or kindly lent for this work. The great majority of the photo-micrographs are the work of Mr. Richard Muir, Demonstrator of Pathological and Bacteriological Methods in the University of Edinburgh, and we desire to thank him for the care and trouble he has taken in their selection and preparation, the majority of the microscopical specimens being from his private collection. The photographs of practically all the naked-eye specimens were taken personally by one of us (W.E.C.D.), and, where not otherwise acknowledged, are from specimens in his own private collection.

We have also to thank Professor Cunningham, Curator of the Edinburgh University Anatomical Museum, and the Fellows of the Royal College of Surgeons, Edinburgh, for permission to use specimens in their museum collections; Mr. Henry Wade, F.R.C.S.Ed., Conservator of the Museum of the Royal College of Surgeons, Edinburgh, to whom we are indebted for the use of several specimens from his private collection, for purposes of illustration; to Mr. Wade our thanks are also due for his kind assistance in revising the chapter on Tumours; to Professor T. H. Milroy, of Belfast, for his help in certain parts of the book dealing with problems of chemical physiology; to Dr. W. E. Marshall, of the Lister Institute of Preventive Medicine, for suggestions in regard to parts of the chapter on Immunity; and to Dr. Ashworth, Lecturer on Invertebrate Zoölogy, Medical Entomology, and Protozoölogy in the University of Edinburgh, for revising the chapter on Animal Parasites.

Lastly, it is a pleasure to acknowledge the uniform kindness and courtesy which we have received from our Publishers in connection with this work, and we thank them for the great care which they have bestowed upon its production.

J. M. B.

W. E. C. D.

October 1908.

PART I  
GENERAL PATHOLOGY



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