

**THE PREPARATION AND  
MOUNTING OF  
MICROSCOPIC OBJECTS.  
TWELFTH THOUSAND**

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The Preparation and Mounting of Microscopic Objects. Twelfth Thousand by Thomas Davies & John Matthews

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**THOMAS DAVIES & JOHN MATTHEWS**

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BY  
THOMAS DAVIES.

EDITED BY  
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*Vice-President Quekett Microscopical Club.*

TWELFTH THOUSAND.

NEW YORK:  
G. P. PUTNAM'S SONS,  
182 FIFTH AVENUE.  
1882.

## PREFACE TO THE SECOND EDITION.

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THE reception accorded to this work has been so favourable as to induce the Publisher to issue a second edition, in which such new matter should be embodied as the progress of Microscopic science might require. He therefore applied to the Author, but he found to his regret that the state of Mr. Davies's health was such as to forbid his undertaking the labour. He had, however, collected many valuable notes and memoranda, which he was willing to place at the disposal of any gentleman who might be selected to edit the work. The Publisher then consulted the present Editor, who, after some hesitation, consented not only to use his best efforts with the ample materials placed at

his disposal, but also to make such additions as his experience might suggest in extension of the usefulness of the book to a new class of readers,—the Medical Student, and the Junior Medical Practitioner. To this end, besides other matter, a brief prefatory chapter has been added, embracing the elements of preliminary histological manipulation. While claiming the indulgence of the elders of his profession,—the Editor feels that the best and truest apology for this treatise, its *raison d'être*—in fact, may be found in the words of its concluding paragraph, to which the reader is now courteously referred.

4, MYLNE STREET, MYDDELTON SQUARE, E.C.

October, 1873.



## PREFACE TO THE FIRST EDITION.

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**I**N bringing this Handbook before the public, the Author believes that he is supplying a want which has been long felt. Much information concerning the "Preparation and Mounting of Microscopic Objects" has been already published; but mostly as supplementary chapters only, in books written professedly upon the Microscope. From this it is evident that it was necessary to consult a number of works in order to obtain anything like a complete knowledge of the subject. These pages, however, will be found to comprise most of the approved methods of mounting, together with the results of the Author's experience, and that of many of his friends, in every department of

microscopic manipulation; and as it is intended to assist the beginner as well as the advanced student, the very rudiments of the art have not been omitted.

As there is a diversity of opinion as to the best mode of proceeding in certain cases, numerous quotations have been made. Wherever this has been done, the Author believes that he has acknowledged the source from which he has taken the information; and he here tenders his sincere thanks to those friends who have so freely allowed him to make use of their works. Should, however, any one find his own process in these pages *unacknowledged*, the Author can only plead oversight, and his regret that such should have been the case.

WARRINGTON.

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CHAPTER I.

INTRODUCTION.

THIS work having been written chiefly to help students, the writer does not venture to affirm of it that it is by any means complete or exhaustive. The art of microscopic manipulation is progressive, and it is scarcely possible, therefore, to say of a work on the subject, that it holds all that is known at any given time. It is an art, too, which is so inextricably mixed up with the highest branches of scientific inquiry, that new modes of investigation are daily devised by the acutest intellects, and with these it is very difficult for a writer to keep pace.

It is a well-nigh hopeless task to attempt to teach such modes of inquiry by precept, yet it is felt that some short account of them may reasonably be expected here. Reference is now made more particularly to the practical part of human and comparative histology. As this is not a treatise on histology, but is devoted mainly to the methods of preserving the results of researches in that science, it is scarcely possible to indicate to the student how he shall proceed in any given case; yet there are certain tests, reagents, and staining matters employed, with the uses and effects of