

**OUTLINES OF PRACTICAL HISTOLOGY:
BEING THE NOTES OF THE
HISTOLOGICAL SECTION OF THE CLASS
OF PRACTICAL PHYSIOLOGY HELD IN
THE UNIVERSITY OF EDINBURGH**

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Practical Physiology Held in the University of Edinburgh by William Rutherford

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WILLIAM RUTHERFORD

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James D. Lathrop
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OUTLINES

OF

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*BEING THE NOTES OF THE HISTOLOGICAL SECTION
OF THE CLASS OF PRACTICAL PHYSIOLOGY*

HELD IN THE UNIVERSITY OF EDINBURGH.

BY

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P R E F A C E.

THE first edition of these Notes was published in the *Quarterly Microscopical Journal* for January 1872. Various circumstances having delayed the appearance of my "Text-Book of Practical Physiology," I have been induced to issue a new edition of the Notes, for the purpose of assisting those who are attending a course of Practical Histology for the first time. The present edition is considerably altered from the first, various new methods having been introduced. All figures of tissues, and most of those of apparatus, are reserved for my larger work. Pathological histology is almost entirely omitted, as this subject is taught practically by my colleague the Professor of Pathology. As the time at the disposal of most students of medicine is very limited, a course has been adopted, whereby students in classes, numbering from twenty to thirty, can be conducted through the leading points of practical histology in about thirty lessons, each lesson extending from an hour to an hour and a half. As

it is impossible in this short time to prepare all the tissues, special demonstrations previously made by the teacher are resorted to, in order that the *introduction* to the subject may be as complete as possible. The special working out of many complicated processes cannot be attempted in a general course of this sort, but must be done by the advanced student working in the laboratory for several hours daily. These Notes especially concern the course which is introductory to an advanced study of the subject, and the reader is desired to bear in mind that they are primarily intended for the students of the University of Edinburgh.

It is not professed that these Notes are more than an outline of the subject of Practical Histology. They merely give the points to which every student of medicine ought to attend. Care has been taken to render all instructions as definite as possible. Descriptions of structure are generally left to the ordinary text-books of descriptive histology. The structure of the microscope is also omitted. When the student desires a full account of the various methods proposed for the examination of the various tissues and organs, let him consult Frey on "The Microscope," and Beale "How to work with the Microscope." Such works should, however, only be used for reference; for although admirable encyclopædias, they can scarcely be regarded as guides for the beginner. Carpenter's book on "The Microscope" will be found an excellent treatise

on the structure of the microscope and its accessories, as well as on botanical and zoological histology.

When the student finds in the following Notes no statement about the preservation of a specimen, it is to be inferred that it is needless to preserve it.

In the course of the demonstrations the student is desired to read the general considerations which follow them (§ 75).

ABBREVIATIONS.

H. Means high power. A combination of lenses, such as Hartnack's ocular No. 3, and objective No. 7, with the tube of the microscope drawn out, magnifying about 300 diam., is the high power most useful for the student.

L. stands for low power. Hartnack's ocular No. 3, objective No. 3, tube drawn out, magnifying about 50 diam.

D. stands for demonstration, and indicates that the student is to prepare a microscopical demonstration.

V. S., L. S., and T. S., respectively mean vertical, longitudinal, and transverse section.

ERRATA.

P. 10, line 11 from top, for *p* read *p'*.

P. 49, last line of large type, *delets* (π .)