Book Review: **'A History of Photography with the Light Microscope' by Brian Bracegirdle.**

Quekett Microscopical Club, 2010

by Peter Guidotti

25 x 25 cm, hardback, 221 pages, about 350 illustrations (some in color) and 536 references.

This book can be obtained from the Quekett Microscopical Club (1) just for the price of postage. Apparently they are running into problems of storage space and need to reduce their inventory.

Brian Bracegirdle probably needs no introduction to the readers of this magazine, but an obituary is available here (2).
This book was clearly a labor of love by the author, probably mostly written in retirement, and allowed him to indulge two of his passions: microscopy and photography.
Many of the illustrations were made by the author himself for the Science Museum in London. Others come from the Borthwick Institute, the Royal Microscopical Society, or from the various microscope manufacturers catalogs.

As the title suggests this is a detailed history of photography through the microscope. The information is derived from what looks like a very thorough perusal of the literature, including books, magazines, technical journals, brochures, in English mostly but including German, French etc. For most mentions there is some kind of illustration or photograph.
The author assumes some expertise in the field and, if like me, you know little about photography, many of the illustrations of set-ups can be difficult to understand, and there is little explanation given. However, since everything is very meticulously referenced, you could always refer to the original publication if desired.
Analysis of progress in specimen preparation goes hand in hand with that of the equipment, and there are many illustrations from the literature of landmark photomicrographs, and pictures of interesting slides.
As the author states in the preface, the style is fairly informal, so although the subject matter is technical and detailed, I found it very readable. As an example, at one point while mentioning the photographic chemical adverts in a publication from 1902 he continues "Henry Wellcome had made a large fortune by tableting everything he could get his hands on (I personally have drunk a very adequate cup of tea made from one of his tablets intended for troops in WW1)"

The first chapter is an introduction to the photographic process starting with Daguerreoptypes, continuing all the way through to digital imaging.

The second chapter is a treatment of that essential element of microscopy: illumination, starting with natural light or candles, and continuing all the way through to LED sources. The theory behind illumination systems is also discussed.

Chapter three is a brief historical treatment of optical components, and is illustrated by a number of catalogue pages from the principal manufacturers listing their objectives.

Chapters 4 – 7 divide the history of photomicrography into the periods: 1839 – 1880, 1880 – 1910, 1910 – 1940, and 1940 – 1980. The last one is my particular favorite period (the 'Golden Age') and there are many fine photographs of classic instruments of the period, interspersed with a discussion of

the technological and scientific advances. However, the shear size and complexity of some of the set-ups from the earlier periods is amazing.

In the next three chapters, the author drops the sequential treatment, and treats individual topics.

Chapter 8 is a discussion of the Photomigrographic Society. This was formed in London in 1911 and ceased in 1951, due to a combination of retirements and post-war financial disruption. During its 40 year lifespan, although membership was quite small, between 100 and 200, it included many of the principal workers in the field, and its *Proceedings* are an important and unique document.

Chapter 9 discusses microphotography (tiny photographs). Believe it or not, J. B. Dancer was already experimenting with this in 1837! As well as illustrations of equipment, there are examples, catalogs etc from Dancer and continental producers. The Pigeon Post, set up when telegraph lines were cut during the Franco-Prussian war in 1870 is discussed. Military dispatches were microphotographed and delivered by pigeon. Later, before the digital revolution, microfiche and microfilm were used to archive documents.

Chapter 10 discusses photomacrography, where specimens requiring only low magnification are photographed using only one lens. Initially, the lens was the microscope objective, but soon dedicated lenses were developed. For example, the famous Zeiss Jughandle of the late 19th and early 20th century was produced in a version for photography with a large diameter tube, and with both ends removeable, so that their Micro-Planar lenses could be attached, together with a connector to the photographic apparatus.

The last chapter returns to the chronological sequence and is devoted to developments from 1980 – 2010.

This book is very meticulously researched and contains a wealth of information. It will be an essential reference for future work in the field. But if, like myself, you are not particularly interested in photomicrography, or consider it just a tool, you may be thinking this book is too technical or detailed. However, firstly, remember the price – postage only. Then, consider the range of topics considered. I found I could open the book at virtually any page and find interesting snippets of information, or at least wonderful diagrams or photographs of classic microscopes, equipment or preparations.

References

(1) http://www.quekett.org/about/books?fbclid=IwAR2C-VVE9WFKK4wqI5Lb_gC5J9P-67V07Xu-4BzQAFuKyi3HJNRE_Grm4t4#light

(2) http://journal.sciencemuseum.org.uk/browse/issue-06/obituary-brian-bracegirdle/obituary-brian-bracegirdle/

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