

Preface

At the end of March 1967, a meeting on 'Plant Fine Structure' was organized at Bodington Hall, University of Leeds, by Professor I. Manton, F.R.S. The cordial atmosphere at that meeting, and the high quality of the science discussed, was such that many of those participating expressed the view that there should be another similar meeting in due course. In fact, it took twelve years before the 'Second International Botanical Microscopy Meeting' was organized by the Royal Microscopical Society in York during July 1979. Once again, rather more than 100 botanical microscopists came together in a relaxed and welcoming atmosphere to communicate their scientific results to each other. On that occasion, one of the subsequent criticisms was that none of the papers presented had been published as part of a conference proceedings. In particular, many of the participants felt that it was something of a loss that the invited papers had not been published together so that botanists other than just those who had been lucky enough to attend the meeting could benefit. In consequence, while organizing the 'Third International Botanical Microscopy Meeting', which took place in York during July 1985 (again under the auspices of the Royal Microscopical Society), I had it firmly in mind that it would be a useful service to science if I could prevail upon the invited speakers to write up their papers for prompt publication. The results of their efforts are represented in this book.

It might well be asked why there should need to be a meeting on botanical microscopy at all and, therefore, why produce a book such as this? Many botanists use microscopes and many microscopists look at plant specimens. Nevertheless, relatively little botany is discussed at electron microscopy congresses, and botanical microscopy plays a small, and often disseminated, part in cell biology meetings. In consequence, it has been useful to get together this relatively small 'club' of people to discuss matters of joint interest. The success was most evident from the vigorous discussion sessions at the meeting where a sufficient 'critical mass' of knowledgeable botanists had come together to make positive contributions to many different topics. As an aside, Professor Manton's own presence and contribution, 18 years on from her earlier meeting in Leeds, set the conference off to a noteworthy start and gave much pleasure to many of the delegates.

In drawing up a list of the main speakers for the 1985 botanical microscopy meeting, my main aim was to accentuate those aspects that were either of

fundamental importance and/or represented innovative science. The reader must judge for him- or herself whether I have been successful. Inevitably, in the year or so between the invitation and the conference, changed circumstances have caused some alterations. Indeed, there have been one or two last minute 'nightmares' for the editor! Nevertheless, the papers presented here represent a cross-section of the important and exciting growth areas of botanical microscopy. The authors are to be congratulated on producing their camera-ready copy to a specific time-schedule. For their part, the publishers have undertaken to make the book available before the end of the current calendar year: an aspect that adds enormously to the value of contemporary work such as this.

Not only are the major papers presented in this volume, but some of the contributed papers will appear in a special issue of the *Nordic Journal of Botany*. Thus, the presentations for *Botanical microscopy 1985* will be well-served in the literature. World-wide pressure on research budgets is having a clear effect on limiting the ability of scientists to get together to discuss their work. It is, therefore, even more important that steps should be taken to try and disseminate scientific information more effectively. The contents of this book should by no means be of interest only to the 'state-of-the-art' research worker. Many of the different contributions will be directly relevant to cell biologists more generally, to university and college lecturers and to schoolteachers at senior level. Novel techniques are constantly being introduced to provide new information about cells and how they work. It is important that details of both techniques and results are communicated from top to bottom of the scientific 'family tree'. The purpose of this book is, in its own small way, to help in that process.

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A.W.R.