Preface

Plant anatomy, the study of plant cells and tissues, has advanced considerably since the early descriptive accounts were made which consisted mainly of cataloguing what was 'out there'. Anatomical data have been applied in the better understanding of the interrelationships of plants, and in the molecular age provide confirming evidence of natural relationships of plant families in combined analyses. Plant physiologists need to know where certain processes are being carried out by plants – there are particularly interesting studies on phloem loading and the transport of synthesized materials, for example. There is a long list of applications, and these are expanded on in Chapter 1. One of us (DFC) wrote a book, *Applied Plant Anatomy* (published in 1978), aimed at reaching students who needed to know about the anatomy of plants, but found the encyclopaedic volumes daunting. This book served its purpose well, but is now very dated and long out of print.

We realized that with the passage of time, many new disciplines had been developed, and older ones expanded to a point where a much revised and updated book of this type could play an important part. Consequently, this volume was conceived, and together with the CD-ROM which takes the study of practical plant anatomy to new levels, presents a ready way for non-specialists to learn about and enjoy the subject, at their own pace and in many places, beyond the formal constraints of the laboratory.

D.F. Cutler, C.E.J. Botha, D. Wm. Stevenson