

# *Ancestry of Land Plants* Linda E. Graham

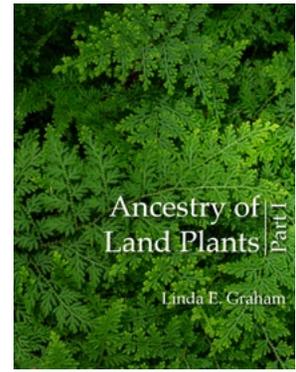
*Ancestry of Land Plants Part I* is a new ebook that summarizes current geological, paleontological, structural, phylogenetic, and diversity knowledge relating to early plant evolutionary history.

The presentation begins with an introductory chapter that highlights diverse research approaches to the subject, illustrating the value of interdisciplinary thinking. There follows an overview of microbial lifeforms that diversified before the rise of land plants, because plants inherited key features from prokaryotic and protistan microbes. Part I then moves forward in time to consider the ancestry and features of modern bryophytes and lycophytes, the earliest-diverging modern lineage of vascular plants. Part I provides the foundation for a second, forthcoming Part II that looks backward in time to focus on the evolutionary history of modern plant genetic and physiological traits important to human sustainability. We anticipate publishing *Ancestry of Land Plants Part II* during 2026.

This book, designed for use by university students and researchers, provides many references to the peer-reviewed literature. Cited literature focuses on relatively-recent primary publications, which provide technical research details that foster reader evaluation of study conclusions, and on literature that is more publicly available. Some key classic references are included. In addition, a number of recent review publications that contain additional references are cited, identified in the text as reviews. However, we have not endeavored to provide comprehensive literature coverage.

Each chapter ends with a list of conclusions that are widely supported by available information, and a list of still-controversial issues. These features aim to help focus future research efforts by pointing out conclusions that are well-positioned to function as foundational knowledge and others that may need more supporting data. A glossary provides definitions for terms indicated in the text in boldface, using the contexts employed in the book. An “end-paper” illustration of geological time periods referenced in the text is provided for easy reference.

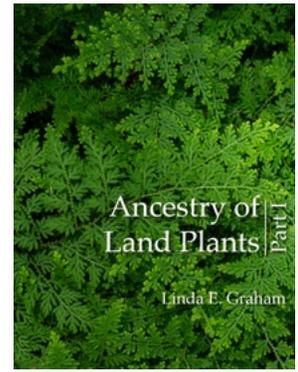
The extensive illustrations included in this book include many original transmission and scanning electron micrographs made by the author, her students, and collaborators, who are identified in image credits. Unparalleled EM images of cyanobacterial cells, originating from the work of Professor Norma Lang, currently in the author’s collection, were contributed by her estate. Additional original microscopy images, and photos of relevant organisms in their natural habitats were generously contributed by Dr. Lee Wilcox, who expertly composited this ebook, and by Dr. Martha Cook.



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We have aimed to provide images at relatively high resolution, for maximum utility to readers. Publishing our images in this ebook format makes them more widely available than they might otherwise be, and potentially useful for research or teaching efforts. For that reason, the reuse of images for such purposes from *Ancestry of Land Plants Part I* is agreeable, on the condition that their source is cited as indicated in the credits associated with each image. Note that some images include publication information required by journal publishers, such that journal permission for reuse may be needed.

We hope readers enjoy this new book-length treatment of early land plant evolutionary history. Since the ebook format allows us to update content as new information comes to light, we will aim to make revisions when the balance of newly-published data make those essential.



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