

**ANCIENT PLANTS, BEING A SIMPLE
ACCOUNT OF THE PAST VEGETATION
OF THE EARTH AND OF THE RECENT
IMPORTANT DISCOVERIES MADE IN
THIS REALM OF NATURE STUDY**

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Ancient plants, being a simple account of the past vegetation of the earth and of the recent important discoveries made in this realm of nature study by Marie C. Stopes

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F. 117

Photo of the specimen in Manchester Museum.

THE STUMP OF A *LEPIDODENDRON* FROM THE COAL MEASURES

Palaeont.
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BY

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Preface

The number and the importance of the discoveries which have been made in the course of the last five or six years in the realm of Fossil Botany have largely altered the aspect of the subject and greatly widened its horizon. Until comparatively recent times the rather narrow outlook and the technical difficulties of the study made it one which could only be appreciated by specialists. This has been gradually changed, owing to the detailed anatomical work which it was found possible to do on the carboniferous plants, and which proved to be of great botanical importance. About ten years ago textbooks in English were written, and the subject was included in the work of the honours students of Botany at the Universities. To-day the important bearing of the results of this branch of Science on several others, as well as its intrinsic value, is so much greater, that anyone who is at all acquainted with general science, and more particularly with Botany and Geology, must find much to interest him in it.

There is no book in the English language which places this really attractive subject before the non-specialist, and to do so is the aim of the present volume. The two excellent English books which we possess, viz. Seward's *Fossil Plants* (of which the first volume only has appeared, and that ten years ago) and Scott's *Studies in Fossil Botany*, are ideal for advanced University students. But they are written for students who are supposed to have a previous knowledge of technical botany, and prove very hard or impossible reading for those who are merely acquainted with Science in a general way, or for less advanced students.

The inclusion of fossil types in the South Kensington syllabus for Botany indicates the increasing importance attached to palæobotany, and as vital facts about several of those types are not to be found in a simply written book, the students preparing for the examination must find some difficulty in getting their information. Furthermore, Scott's book, the only up-to-date one, does not give a complete survey of the subject, but just selects the more important families to describe in detail.

Hence the present book was attempted for the double purpose of presenting the most interesting discoveries and general con-

clusions of recent years, and bringing together the subject as a whole.

The mass of information which has been collected about fossil plants is now enormous, and the greatest difficulty in writing this little book has been the necessity of eliminating much that is of great interest. The author awaits with fear and trembling the criticisms of specialists, who will probably find that many things considered by them as particularly interesting or essential have been left out. It is hoped that they will bear in mind the scope and aim of the book. I try to present only the structure raised on the foundation of the accumulated details of specialists' work, and not to demonstrate brick by brick the exposed foundation.

Though the book is not written specially for them, it is probable that University students may find it useful as a general survey of the whole subject, for there is much in it that can only be learned otherwise by reference to innumerable original monographs.

In writing this book all possible sources of information have been consulted, and though Scott's *Studies*¹ naturally formed the foundation of some of the chapters on Pteridophytes, the authorities for all the general part and the recent discoveries are the numerous memoirs published by many different learned societies here and abroad.

As these pages are primarily for the use of those who have no very technical preliminary training, the simplest language possible which is consistent with a concise style has always been adopted. The necessary technical terms are either explained in the context or in the glossary at the end of the book. The list of the more important authorities makes no pretence of including all the references that might be consulted with advantage, but merely indicates the more important volumes and papers which anyone should read who wishes to follow up the subject.

All the illustrations are made for the book itself, and I am much obliged to Mr. D. M. S. Watson, B.Sc., for the microphotos of plant anatomy which adorn its pages. The figures and diagram are my own work.

This book is dedicated to college students, to the senior pupils of good schools where the subject is beginning to find a place in the higher courses of Botany, but especially to all those who take an interest in plant evolution because it forms a thread in the web of life whose design they wish to trace.

M. C. STOPES.

December, 1909.

¹ My book was entirely written before the second edition of Scott's *Studies* appeared, which, had it been available, would have tempted me to escape some of the labour several of the chapters of this little book involved.

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