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A Flora of Cambridgeshire

This flora, published in 1964, was the first comprehensive account of Cambridgeshire's plants since Babington's of 1860. Based on records to the end of 1962, it details 1509 species. These comprise 27 pteridophytes, 3 gymnosperms, 1223 angiosperms and 256 bryophytes. The following information is provided for each of the species: scientific name; well known vernacular name, if any; first known record of the plant in the county; synonyms; habitat; notes on rare, difficult or interesting species; distribution by OS grid reference numbers. The introduction examines local topography, climate, the main geological areas and vegetation types, together with a history of botanical investigation in the county. Important localities are noted, highlighting key species that could then be found. Botanists, conservationists and naturalists will find this historic flora provides a valuable baseline for contemporary studies, including those focusing on biodiversity, extinction or the effects of climate change.



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A Flora of Cambridgeshire

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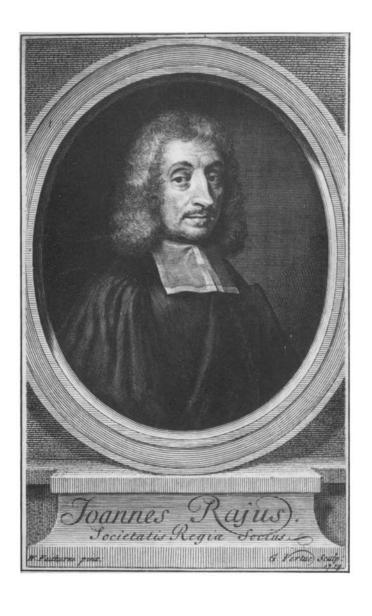
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A FLORA OF CAMBRIDGESHIRE







A FLORA OF CAMBRIDGESHIRE

BY
F. H. PERRING, P. D. SELL
AND
S. M. WALTERS

with a section on Bryophyta by H. L. K. WHITEHOUSE

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TO THE MEMORY OF JOHN RAY RICHARD RELHAN CHARLES C. BABINGTON

'We would urge men of University standing to spare a brief interval from other pursuits for the study of nature and of the vast library of creation so that they can gain wisdom in it at first hand and learn to read the leaves of plants and the characters impressed on flowers and seeds....We are sure that the pursuit of plants can appeal to the young; for we have seen many sons of Trinity College finding in it both bodily exercise and mental satisfaction. Of course there are people entirely indifferent to the sight of flowers or of meadows in spring, or if not indifferent at least pre-occupied elsewhere. They devote themselves to ball-games, to drinking, gambling, money-making, popularity-hunting. For these our subject is meaningless.'

JOHN RAY: Preface to Catalogus Plantarum circa Cantabrigiam nascentium, 1660



CONTENTS

LIST OF ILLUSTRATIONS	page VIII
FOREWORD	ix
PREFACE	xi
LIST OF CONTRIBUTORS	xiii
INTRODUCTION	1
History of the Study of the Flora	1
Topography	7
Climate	8
The Flora of Cambridgeshire	15
Geological areas and their types of vegetation	15
(1) Fenlands	15
(2) Chalk	23
(3) Boulder clay	26
(4) Breckland	28
(5) Greensand	29
(6) Salt-marsh	30
EXPLANATION OF TEXT	31
ACCOUNT OF THE SPECIES	
Pteridophyta by F. H. Perring, P. D. Sell and S. M. V	Walters 33
Spermatophyta by F. H. Perring, P. D. Sell and S. M.	Walters 40
Gymnospermae	40
Angiospermae	41
Bryophyta by H. L. K. Whitehouse	281
MAP OF CAMBRIDGESHIRE	facing page 330
BIBLIOGRAPHY	page 331
INDEX	341



	77 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
	ILLUSTRATIONS
	PLATES
JO	PHN RAY frontispiece
	Between p. 32 and p. 33
1	(a) The wind-pump, Wicken Fen, September 1956. W. M. Lane.
	(b) Spring scene in Buff Wood, April 1963. P. D. Sell.
2	Asplenium ruta-muraria on the steps of the Senate House, Cambridge, 1952. F. H. Kendon.
3	Trifolium ochroleucon, Hardwick, 1952. M. C. F. Proctor.
4	Hottonia palustris in a peaty ditch near Upware, 1950. M. C. F. Proctor.
5	Lathraea clandestina by the river, Cambridge, 1951. M. C. F. Proctor.
6	Aceras anthropophorum, Abington, 1958. J. C. Faulkner.
7	Cephalanthera damasonium in Beech woodland, Gog Magog Hills, 1950. M. C. F. Proctor.
8	Acorus calamus, Earith, 1951. M. C. F. Proctor.
	DISTRIBUTION MAPS
1	Distribution of <i>Ulex gallii</i> page 11
2	Distribution of Silene dioica 12
3	Distribution of <i>Trifolium ochroleucon</i> 13
4	Distribution of Cephalanthera damasonium 14

viii



FOREWORD

To produce a new Flora of Cambridgeshire is to be responsible for accepting a great tradition and adding to what may well claim to be the most famous sequence of local taxonomic records in the world. When the present volume was planned it was hoped to publish it in the tercentenary year of John Ray's Catalogus Plantarum circa Cantabrigiam nascentium published in 1660 and marking not only its author's entry into the study of natural history but the first scientific treatment of our native plants. Ray's book records a large number of species new to botany and gives first lists of plants found in particular types of localities, the lanes of Chesterton and Ditton, the chalk of the Gog Magogs and Cherry Hinton, the woods of Madingley and Kingston, Newmarket Heath and the Devil's Dyke and the fens at Teversham and Stretham ferry. How thoroughly he observed is witnessed by the fact that several species are still only found in the place where he discovered them, and one, Veronica spicata, which he recorded as 'in a close near the beacon on the left hand of the way from Cambridge to Newmarket in great plenty', was lost from his day till after much research Dr W. H. Mills rediscovered it in the thirties.

Since Ray's time the Cambridgeshire plants have been resurveyed by Charles Cardale Babington, Professor of Botany in 1860—a careful and accurate record giving for the first time lists of some of the 'difficult' genera—a worthy successor to the *Catalogus*; and by A. H. Evans, a keen field-naturalist who brought the records up to date in 1939. It is obvious from the present volume how much has been done both in the addition of species, some of them now well established, but one or two apparently old inhabitants, and in the discovery and identification of taxonomically important races. To these as to the whole question of plant distribution much attention largely centred in Cambridge has been given in the past decade.

But the tradition in the University does not begin with Ray. It goes back to William Turner, the 'father' of English natural history, Fellow of Pembroke in the second and third decades of the sixteenth century, author of the first bird-book of the modern world, and of the first English folio herbal; to his successor Thomas Penny of Trinity whose own work was mainly on insects but who sent brilliantly exact descriptions of a number of British plants, including *Arnoseris*, to his



FOREWORD

friend Charles de l'Ecluse (Clusius), and to Peter Turner, William's son and himself a botanist with an international reputation. There was a barren half-century between them and Ray: but since then the succession has not failed; and if taxonomy still plays a large part in its activities, pollen-analysis and quaternary research prove that it has also expanded its frontiers and deepened its researches.

This new Flora is the outcome of some ten years of shared study in ecological, genetic and cytological research as well as of field-work and experimental cultivation. It had been stimulated both by the enthusiasm of Mr H. Gilbert Carter of the Botanic Garden who gathered a body of young explorers round him and by the preparation of the Flora of the British Isles and the 'B.S.B.I. Maps Scheme' which has united professionals and amateurs in a large-ranging effort. Taxonomy has thus spread beyond the herbaria into the research stations, the laboratories and gardens, and is opening up problems which may be expected to throw light upon the basic conditions of plant physiology and evolution. 'Name this plant' is the proper beginning of botanical knowledge: this book will help to show how wide and deep are the issues which must be settled before a worthwhile answer can be given.

November 1961

CHARLES E. RAVEN



PREFACE

John Ray published the first Flora of Cambridgeshire just over three hundred years ago, and since then the study of our local plants has been almost continuous. Relhan (1785) and Babington (1860) published further Floras at approximately hundred-year intervals, and this Flora was first planned by the Cambridge Natural History Society to appear in 1960, the tercentenary of Ray's work. Unfortunately we underestimated the amount of work involved, and regretfully decided to abandon the original date.

This work, based upon the Natural History Society's records, departs from the standard practice of most local Floras in that it does not give long lists of localities under each species. In their place is a concise list of Ordnance Survey Grid References which give an adequate picture of the main features of distribution of the species. The space saved allowed us to include taxonomic notes, comments and keys, which we believe will prove to be more valuable than the traditional distribution data.

1519 species are listed, of which 27 are Pteridophyta, 3 Gymnospermae, 1228 Angiospermae and 261 Bryophyta. Of the 1231 seed plants, 968 are native (65 of these being extinct), 19 are doubtfully native, 81 are naturalized, 31 are planted trees, and 195 casuals, garden escapes or relics of cultivation. Of the 27 Pteridophyta one is introduced and nine extinct. Of the Bryophyta 222 are mosses (20 extinct) and 39 liverworts (4 extinct).

The area covered by the Ordnance Survey Grid Square 52/45, which includes the City of Cambridge, must be one of the best known areas botanically in the world. In it have been recorded during the last 300 years 1174 species, of which 1002 are vascular plants and 172 Bryophyta.

We are particularly pleased that it has been possible to include in this volume Dr H. L. K. Whitehouse's excellent up-to-date account of the Bryophyta. Interest in the mosses and liverworts of the county has been steadily increasing in recent years, largely through Dr Whitehouse's own interest and enthusiasm, and we can confidently expect future generations of students of the Cambridgeshire flora to include the Bryophyta in their studies.

The number of people who have contributed to this Flora is so large



PREFACE

that it is impossible to thank them all individually, but we have tried to give a complete list of those who have recorded plants in the county (see p. xiii). The following have either determined specimens or helped with the accounts of critical genera: A. O. Chater (Callitriche and Carex), C. D. K. Cook (Ranunculus subgen. Batrachium, and Sparganium), D. E. Coombe (Impatiens and Trifolium), A. C. Crundwell (Bryophyta), R. A. Graham (Mentha), J. Heslop Harrison (Dactylorchis), W. H. Mills (Rosa and Rubus), Mrs J. A. Paton (Bryophyta), R. H. Richens (Ulmus), T. G. Tutin (Bromus and Cyperaceae), D. H. Valentine (Primula and Viola), E. F. Warburg (Bryophyta), P. F. Yeo (Euphrasia) and D. P. Young (Epipactis).

Professor H. Godwin has read the account of the Fens and made many useful suggestions. In addition, K. Albon has extracted temperature and rainfall readings from the Botanic Garden records, B. A. Golding has drawn the Map, M. C. F. Proctor and J. C. Faulkner supplied the photographs, W. Stigwood helped with the documentation, and Mrs A. Wright has twice performed the exacting task of typing the manuscript. Information on the crop plants was supplied by officers of the National Agricultural Advisory Service for Cambridgeshire and for the Isle of Ely.

The distribution maps are reproduced from the Atlas of the British Flora by kind permission of Thomas Nelson and Sons Ltd, and the Botanical Society of the British Isles.

Special thanks must be given to the University Press for publishing the book and to the Royal Society for a generous grant of £300 towards its publication. Lastly, our thanks are especially due to H. Gilbert Carter, who inspired several generations of Cambridge botanists to do better things.

We hope that this book will be a guide to the local flora, not only for the successive generations of University students, but also for those people who like to spend their spare time looking for wild flowers as a recreation. This work shows only too clearly how many of our species have become extinct or extremely rare. We hope that in a more enlightened age, the next authors of a Cambridgeshire Flora, in perhaps another hundred years, will not have to record a further dismal list of extinctions. The activity of the recently formed Cambridgeshire and Isle of Ely Naturalists' Trust gives us grounds for this hope.

F. H. PERRING P. D. SELL

December 1962

S. M. WALTERS

xii



LIST OF CONTRIBUTORS TO THE FLORA

The following list gives the names of all those who have in some way contributed records to this account. They have sent in records for the Maps Scheme, entered records in the Natural History Society's Card Index, published records, or made herbarium sheets. Botanists who have put many specimens from the county in the University Herbarium (CGE) are marked with an asterisk, while those marked with a dagger have written papers on Cambridgeshire plants.

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xiii

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NOTE ADDED IN PROOF

In 1962 E. F. Warburg found *Pottia caespitosa* (Bruch ex Brid.) C. Müll. on the Devil's Dyke, and in 1963 J. M. Lock found *Hookeria lucens* (Hedw.) Sm., *Polytrichum commune* Hedw., *Sphagnum fimbriatum* Wils. and *Tetraphis pellucida* Hedw. at Wicken Fen. These interesting records were received too late to be included in the general text.