

The Moss Flora of Britain and Ireland

This book describes and illustrates in detail the 763 species of mosses currently known to occur in the British Isles and incorporates the most up-to-date information available on classification and nomenclature, together with recent synonyms. The species descriptions provide information on frequency, ecology, geographical relationships and distribution, including information on protected species and those species at risk. For many species there are footnotes to aid identification. In addition to the species descriptions there are descriptions of families and genera and also introductory information on conservation, collection, preservation and examination of material, together with advice on using the keys. An artificial key to genera provides the only workable comprehensive key published in the English language. As a further aid to the user a list of English names for all British mosses is included, plus a comprehensive glossary and bibliography.

This second edition incorporates the very considerable advances in knowledge of mosses made in the last quarter of the twentieth century. In this time eight species new to science have been described in Britain, 25 species not previously known in the British Isles have been discovered and taxonomic revisions have led to the addition of a further 51 species. Fourteen species have been removed, bringing the total number of species described to 763. Additionally, modern taxonomic methods have led to an increase in the number of genera from 175 to 214.

This thoroughly updated and comprehensive Flora represents a unique resource for all those interested in this fascinating group of organisms

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SECOND EDITION

A. J. E. SMITH

With illustrations by Ruth Smith

Additional illustrations by A. J. E. Smith



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Dedicated to the memory of my beloved wife Ruth

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Preface to the first edition

It is now more than fifty years ago that the third edition of *The Student's Handbook of British Mosses* by H. N. Dixon & H. G. Jameson was published in 1924. Since that time the very considerable taxonomic and nomenclatural changes have been such that it is difficult for the non-expert to equate the 1924 taxa with those of today. Taxonomic revisions have resulted in the splitting of genera (and Dixon had an extraordinarily broad concept of the genus in *The Handbook*) and the recognition of numerous additional species especially in the *Bryum capillare*, *B. erythrocarpum* and *Plagiothecium denticulatum/nemoreum* complexes. As a consequence of the marked increase in interest in field bryology since the end of the Second World War numerous new species have been added to the British and Irish lists. Dixon recognised 115 genera and 625 species (in present day terms) compared with the 175 genera and 692 species described here. There is also an increasing awareness of the extent of morphological variation and the existence of taxonomically difficult groups requiring further study.

It was felt that a new moss flora was long overdue, hence the production of this book. It must be stressed that this is not a revision of Dixon & Jameson but is a completely new moss flora embodying recent ideas and views, some doubtless controversial, on the taxonomy of mosses. Although I have sought opinions and guidance from many sources, except for the three genera contributed by other authors (*Sphagnum*, *Campylopus* and *Pottia*) the views expressed here are entirely my own.

Bangor, August 1976

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Preface to the second edition

Since the publication of the first edition in 1978, in which 693 species were described, there have been considerable advances in our knowledge of British and Irish mosses and in the taxonomy of critical groups such as *Andreaea* and the *Hypnum cupressiforme*, *Racomitrium heterostichum*, *R. canescens* and *Schistidium apocarpum* complexes. Since 1978, eight species new to science have been described in Britain, 25 species not previously known in the British Isles have been discovered and taxonomic revisions have led to the addition of a further 51 species. Fourteen species have been reduced to varieties of or to synonymy with other species or removed from the British list. This has resulted in an increase of 70 in the number of species making a total of 763.

Additionally, critical studies of generic limits, as in the Amblystegiaceae and Pottiaceae, and DNA studies have led to a considerable increase in the number of genera – from 175 to 214 in the British Isles. There have also been major changes in the overall classification of mosses. Clearly, the first edition of this book was in dire need of updating. Apart from additions and taxonomic changes, the original descriptions of species have been revised and in some instances augmented and footnotes added or increased where thought necessary. The key to genera and keys to species have been revised in the light of experience since they were first published.

Llandudno, Conwy, March 2003

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