

### MOSSES AND LIVERWORTS OF BRITAIN AND IRELAND: A FIELD GUIDE

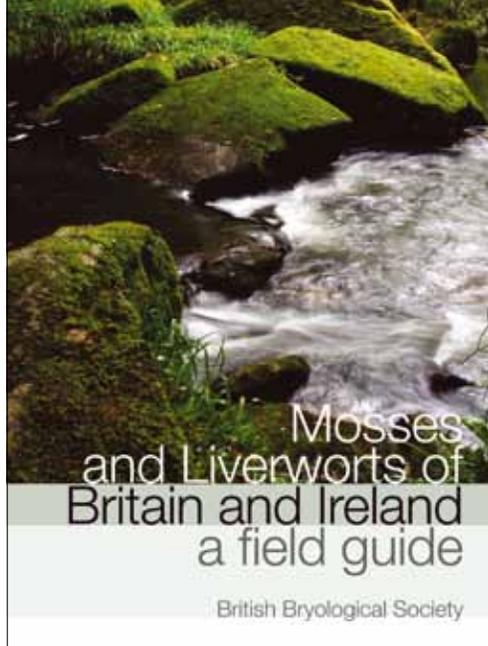
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This attractive-looking, multi-author, paperback volume is arranged along the now familiar lines of natural history photo guides, but with some exceptions. There is a brief introduction followed by 'galleries' of line drawings depicting the main categories of liverwort and moss, and then a long field key with illustrations in the page margins where clarification was deemed necessary. *Sphagnum* identification is dealt with separately by means of a table itemizing the characteristics of the main sections and some of the most distinctive species of the genus. This table leads to four short *Sphagnum* section keys. The main body of the work consists of the individual species accounts which, at the rate (usually) of one page per species or species aggregate, run to an enormous 752 pages! The introductory notes claim that about 75% of the region's species are included. At the back of the book there are lists of the species to be expected in different major habitat types and a conventional index. Rather strikingly, compared to all other field guides I have seen, there are no details about the life cycle or general biology of bryophytes. A criticism often levelled at photographic guides is that they reinforce the ego of the compiler(s) rather than addressing the concerns of the real beginner struggling to turn chaos into order. So, how does this field guide succeed, when earlier efforts using photography (e.g. Phillips, 1980; Vitt *et*



*al.*, 1988) have been only partially successful? More pointedly, is it realistic to expect bryologists to use this work to make field identifications?

One's senses on first handling the book are wooed by the copious numbers of attractive colour photographs and clean layout. This is without doubt the most extensive collection of close-up photographs of British and Irish bryophytes that has ever been published. Each species account is illustrated by at least one approximately half-page photograph and many by two, three or even four smaller pictures showing different structures or states of the plant. This does at least help to deal with the common criticism that a single photograph cannot show all the facies of a variable wild plant. In the time-honoured style of bird guides, the photographs of many species are overlaid with arrows and text boxes drawing attention to features important for field identification. I am sure many people will enjoy simply browsing through the images of species, especially the rarer ones, and the book should help to hone the senses before seeking an unfamiliar quarry! Another very positive feature is that the species accounts are written by experienced field bryologists, some of whom encounter plants, which are unfamiliar to most of us, on an almost daily basis. However, to weigh against these positives, there are also some negative features.

My review copy weighed 1.28 kg. That is rather heavy to earn a place in the average day sac. I suspect that many users will find it easier to bring the plant home than to take the book into the field. Also, the cover is rather too flimsy to stand up to much use out of doors. I took my review copy on a recent recording visit to mid-Wales and even though I did not take it outside because of the rain, by the end of the trip it had accumulated irritating quantities of that gritty detritus that habitually resides in the bottom of any field bag, trapped between plastic outer skin and the thin card covers. If a later edition is planned, perhaps something more durable like the welded plastic covers used in the second edition of Stace (1997) could be considered?

However, one of my main criticisms concerns the complexity of the field keys. I could find no obvious flaws, but these amount to 50 pages, and that alone will probably determine that plants are more often identified at home than in the field.

The text comprising each species account is divided into three sections: identification, similar species and habitat. These have been contributed by a large team, comprising some of the most able and active field bryologists in the BBS today. There are instructive comments by those familiar with especially troublesome but common groups such as *Grimmia*, *Jungermannia*, *Schistidium apocarpum* agg. and *Sphagnum*. Even experienced field bryologists are likely to find helpful snippets by studying these. I suspect that the main value of the book will be to those who are already reasonably experienced. A narrow marginal column on each page provides a thumbnail distribution map of the taxon and often a line drawing illustrating leaf shape or capsule details. The maps are plotted at the unfamiliar 20×20 km scale and thus tend to exaggerate the areas of distribution compared

to the more familiar hectads (10×10 km), but they are perfectly acceptable to indicate areas where a species may be expected to turn up in a work of this kind. Nomenclature follows Paton (1999) and Smith (2004). Order names appear above each species account but their significance is never explained. No authorities are given, but English names are provided. The latter are not used by most of the authors in their accounts. As far as I am aware, these are not in regular use by field bryologists, so one wonders why they have been given when biology has been so simplified.

Although this book has a number of attractive features and will be a useful general resource to use alongside other floras, it seems to me to be the result of an unresolved struggle between two differing visions. The first is of a simple guide to aid beginners to name common bryophytes. The second is of a general photographic guide with advanced field identification 'cribs' that could be used to supplement the information contained in the standard floras. Both would make admirable objectives, but they need radically different approaches. This book is about 300 pages longer than any other field guide that I possess and includes many species (e.g. *Rhynchoszegium rotundifolium*, *Anastrophyllum joergensenii*, *Campylophyllum halleri*) that are very rare and most of us may never see in the British Isles.

The decision to emphasize the 'field guide' aspect to the total exclusion of microscopical characters is questionable in my opinion. Bryophytes lie at the margins of the macroscopic and microscopic spheres, and microscopic examination is frequently essential for secure identification. We see the effect of this policy in several accounts (e.g. *Leucobryum glaucum/juniperoideum* and *Metzgeria fruticulosa/temperata*) where potentially helpful cell details (sizes or numbers) are not mentioned. There is space in at least

some rubrics where this information could have been placed.

Despite my criticisms, this is a valiant effort by the team involved that will do much to advance identifications of bryophytes in Britain and western Europe. Some of the shortcomings may possibly be remedied in future editions and, who knows, the momentum achieved may encourage someone to produce that much-needed flora for beginners.

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## MOUSSES ET HÉPATIQUES DE PAÏOLIVE (ARDÈCHE ET GARD, FRANCE)

By Vincent Hugonot

Published by Société Botanique du  
Centre-Ouest (SBCO), Jarnac, France (2010)

€41.00 (for SBCO members)

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Local bryophyte Floras remain relatively scarce in Britain, and each new one provides an insight into an unfamiliar part of the country. Patterns we see in our counties are illuminated by those observed elsewhere, and search images are enhanced by reading where other recorders find their mosses and liverworts. More local Floras are now appearing as stand-alone books than used to be the case, so the individual styles and idiosyncrasies of the authors become visible, and new features and analyses can be included. *Mousses et Hépatiques de Païolive* is a 293-page stand-alone local bryophyte Flora of a 20 × 20 km area of south-eastern France. It is written entirely in French, so might prove impenetrable to some BBS members, but is well worth persisting with if you have at least some grasp of the language.

The Bois de Païolive is famed for its spectacular karstic scenery, with Jurassic limestone

## References

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dominating the geology. Its gorges and 'ruini-form' rock features make it a popular tourist attraction, as well as providing suitable habitat for 300 species of bryophyte, and many other plants, animals and fungi. Vincent Hugonot introduces the site habitat by habitat, with many accompanying colour photographs of bryophyte communities. This sets the tone for a generally attractive Flora, with full colour throughout and more than 600 photographs and maps. Bryophyte phytosociology plays a prominent role here, and the introduction includes both familiar British communities such as the *Orthotricho anomalii*–*Grimmietum pulvinatae* or *Ceratodonto purpurei*–*Polytrichion piliferi*, and less familiar Mediterranean ones, like the *Mannion androgynae*. It is interesting that the communities all seem to make sense, given the general unpopularity of this kind of phytosociology in Britain.

The first idiosyncrasy comes with the arrangement of the species accounts, where mosses and liverworts are mixed together in alphabetical order. This is probably supposed to be accessible to people who are unfamiliar with bryophytes and do not know if *Brachythecium* is a moss or liverwort genus. However, the only index is for the given names, rather than including

common synonyms, so anyone seeking *Racomitrium canescens* will only find it by looking under *N* for *Niphotrichum*: if the list were ordered taxonomically one could get there by searching around *Grimmia*. The accounts themselves include a map at the 1×1 km square scale accompanied by notes on habitat, phytosociological grouping, local frequency and observed reproduction. They also have a discussion section that provides extremely useful information on field recognition, taxonomic issues and confusion species. The author's thoughts on tricky groups such as *Orthotrichum*, *Riccia* and *Syntrichia* are invaluable, and are a feature that distinguishes *Mousses et Hépatiques de Païolive* from most other local Floras. A photomicrograph accompanies many species accounts, but its subject sometimes seems a bit

arbitrary: the *Fissidens* and *Orthotrichum* leaves and *Syntrichia* cross-sections are very useful, but the usefulness of the *Radula complanata* gemma photograph, for example, is questionable.

Discussion of the value of the Païolive flora follows the species accounts, and includes much useful information. The extensive accounts of the area's threatened species put them into a French and European context, and would be worth copying for British local Floras. There are extra data on species such as *Zygodon forsteri*, which is primarily found below tree wounds caused by old forestry works, and *Scorpiurium sendtneri*, which is described as well-characterized and behaving as a good species at Païolive despite widespread doubts about its taxonomic validity. There is a biogeographic analysis that shows a preponderance of Mediterranean taxa, and another which reveals that the Pottiaceae accounts for 20% of the site's bryophyte flora. The book ends with a discussion of conservation issues, illustrated with photographs of rock faces rubbed clean of moss by visitors' hands, or spray-painted by graffiti artists.

Most British bryologists would think that a French language local Flora of an area they have never heard of is not worth reading, but the Païolive Flora is an excellent example of its kind, which will be a useful model for authors of British county Floras. Insightful discussions of typical Mediterranean genera such as *Orthotrichum* and *Riccia* make it particularly helpful for any British bryologists who travel to Mediterranean Europe. The only slight issue is the high price, forced up by the exchange rate, and the need for people to join the SCBO before they can buy the book.

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A French translation of this review by SCBO President Yves Peytoureau is available on the *Field Bryology* website.

