

Book Reviews

The Plant Life of Snowdonia. Edited by P. Rhind & D. Evans. Pp. xv +173. Gomer Press, Llandysul, Ceredigion. 2001. £19.95. ISBN 1 84323 044 5

The best books are often written by people who not only know their subject intimately but are passionate about it too. It's clear that the ten contributors to *The plant life of Snowdonia* fulfil both these criteria, and the result is an intelligent and wonderfully evocative account of a very special area.

After the preface (Dick Roberts) and Introduction (Peter Rhind), eight chapters follow, each dealing with different groups of plants in Snowdonia – Seed Plants, Ferns, Clubmosses and Quillworts, Horsetails, Mosses and Liverworts, Fungi, Lichens and finally Freshwater Algae. This ensures a refreshingly complete treatment of all the groups, an approach that is reinforced by the use of similar headings within each chapter. These cover an introduction to each group, a history of recording, descriptions of habitats, a discussion of conservation issues and a bibliography. Although this could lend the book a slightly pedestrian feel, it does not, bringing instead a structure that is especially welcome when reading chapters dealing with unfamiliar groups. I was surprised, however, that ferns, clubmosses and quillworts, and horsetails were each given chapters of their own, whilst mosses and liverworts were lumped together.

Dealing with such a wide range of subjects in a book of 150 pages obviously means that some readers will be left wanting more. The bibliographies help, but these too can be a bit short (Chris Page's *The ferns of Britain and Ireland* (1997) should perhaps have been included in several chapters and Dewi Jones's *The botanists and guides of Snowdonia* (1996) in that on flowering plants). The target audience, however, I suspect is a wider general readership and, as a thoroughly readable introduction to the subject, it is excellent.

Finally, it has to be said that the photography is stunning. Peter Rhind has an ability to capture the "mood" as well as the form of each subject, and his portraits of fungi are particularly good.

T. DINES

Les Orchidées de France, Belgique et Luxembourg; (a collective work under the aegis of the Société Française d'Orchidophilie.) Parthenope, Paris. 1998. £32.00 from Lopinga Books Tel: 01799-599643. ISBN: 2-9510379-1-0.

This is an extremely comprehensive work on the orchids of metropolitan France (i.e. including Corsica, but excluding overseas territories such as Réunion), Belgium and Luxembourg – a region that cuts a swathe through the west of Europe, and therefore includes a wonderful variety of species, amounting to almost 150 taxa in all.

Before the species description, there is an extensive general section, covering the biology, biogeography, ecology, conservation and history of orchids, followed by about 250 pages of species descriptions, totalling 416 pages in all. There is a simple key to the genera, then more detailed keys within every genus other than monospecific ones. I haven't had the chance to try these in the field, but they look easy enough to follow.

The species descriptions are the core of the book, with 1–2 pages per species, comprising one or more photographs, a distribution map, description, and details of habitats, protection, known hybrids, and flowering time. The photographs are almost all of very high quality, well-chosen to show what is required. The maps are very useful, but are based only on presence or absence by Département, so they can be slightly misleading, and I suspect that there is a fair bit more to be discovered about the distribution of orchids in France, especially in the light of new subdivisions of species. The text is detailed and useful. The definition of species is not very different to Delforge's Collins photoguide to orchids of Britain and Europe, though there will be a few surprises to anyone used to older books; for example, the old vanilla orchid *Nigritella nigra* no longer exists, replaced by four component species, none of which has the original name.

I can recommend this book wholeheartedly if you visit this area and can read French, and the photos and maps would make it useful even if you don't. It's one of a small series that also includes an excellent guide to butterflies of France.

B. GIBBONS

The Evolution of Plants. K. J. Willis and J. C. McElwain. Pp. x + 378. Oxford University Press, Oxford, 2002. Pbk £22.95. ISBN 0-19-850065-3.

Aimed at undergraduates, this new textbook on plant evolution begins with a valuable discussion of how we know what we know, i.e. of fossil data and of the various methods of dating the finds. The book then proceeds to describe the main events in plant evolution: origin of prokaryotes, followed by eukaryotes, the colonisation of land, diversification and evolution of the land flora, the origin of the seed habit and finally of flowering plants and their subsequent diversification. There are also interesting discussions on the roles of dinosaurs and insects in stimulating plant radiations. Given the title of this book, I expected somewhere to find a clear definition of 'plant', or at least an indication of the groups that collectively make up this taxon. The authors appear to regard the various algal groups as plants (p. 1), but this issue is not further addressed and the account simply drifts into how green algae invaded the land and generated a whole new flora. Given that it is green plant evolution that is intended, the authors have provided a well illustrated and up-to-date treatment of the relationships between the various extant land-plant lineages and their fossil relatives, citing much recent evidence from palaeontological and molecular (including fossil DNA) studies. A key innovation is the emphasis given to the development of various vegetation types and their biogeographical distribution at each stage in history, all of which makes for fascinating reading.

All in all I recommend this book, but do not be misled by the absurd hyperbole offered by the publishers on the cover, which puffs this volume as "the most accessible, modern, and comprehensive book on plant evolution ever published". The claim to being the most comprehensive is of course complete nonsense. This is not a criticism of the authors, however, who are to be congratulated on summarising successfully a great deal of recent evidence on plant evolution from a global perspective.

R. J. GORNALL

Poisonous Plants and Fungi in Britain and Ireland (Interactive identification system on CD-ROM). Primary editors E. A. Dauncey, T. G. J. Rayner and D. A. Shah-Smith. The Royal Botanic Garden, Kew and the Medical Toxicology Unit, Guy's and St Thomas's Hospital NHS Trust. £39.95. ISBN 1-900347-92-X

The Royal Botanic Garden Kew and the Medical Toxicology Unit, Guy's and St Thomas's have collaborated to produce this database of poisonous plants and fungi. By combining their talents they have created a unique reference tool. The CD covers approximately 350 plant and fungal groups. Some genera such as *Asparagus*, *Crocus* and *Agaricus* are dealt with as single groups, while others, such as *Hyoscyamus niger* and *Amanita virosa*, are dealt with as single species. In total 2000 plants and 125 fungi are covered.

The information provided on each species is extraordinarily detailed. Information on the toxicity, clinical effects and treatment are given along with a detailed botanical description of the species. To condense this information for rapid appraisal there is a summary page noting the key points. Glossaries of botanical and medical terms are provided and prove essential to understanding the language used.

The publication features three interactive, illustrated keys. One key is to identify the fungi, another for the plants and another to diagnose poisoning syndromes. The intention is that these keys can be used with only basic botanical knowledge. Unlike standard dichotomous keys, these keys can be used in a number of ways. Questions can be skipped, answers can be amended and questions can be answered out of sequence. If the species can not be uniquely identified from the given answers then a short-list of possible identifications is provided. Each species can then be reviewed independently for a final identification. The identification keys are a primary feature of the CD. They operate well but, like all keys, they are not infallible. I was unable to identify a *Cyclamen* from its rootstock because I had answered that the rootstock was a corm rather than a tuber. To be generous, perhaps only a botanist would have answered the question this way.

I found two "bugs" in the program, though these are largely cosmetic and may be unique to the operating system (Windows 2000) and screen resolution (1024 × 768 pixels) I used. The first of these problems is that the *continue* button is not visible on the start up screen. I only know it should be there from the instruction manual. I've now discovered that you can go into the program by pressing the keyboard's *enter* key. The second problem is that some of the labels on the

illustrated key are only partially visible. In general this has been more of an irritation than a problem.

The database of information on this CD is a significant reference tool. The software supporting this database is reliable and functional, but not elegant or progressive. Nevertheless, if you have either professional need or a morbid interest in poisonous plants and fungi then this CD is likely to satisfy your requirements.

Q. J. GROOM

The Flora of County Cavan. P. A. Reilly. Pp. 177, with 16 colour photographs, 2 maps. National Botanic Gardens, Glasnevin, Dublin, Occasional Papers No. 13. ISSN 0792-0422. Pbk Euros 15.20 (incl. postage)

It came as a complete surprise one day when a copy of Paddy Reilly's Cavan flora landed on my desk in the Ulster Museum. I had known that Paddy had been assiduously working towards a flora of this attractive county for some years, but had no idea that its appearance in print was imminent. One gets used to flora projects which extend well beyond the projected time (including my own third edition of the *Flora of the North-east of Ireland* which was originally intended to mark the centenary of the first edition but missed that event by some four years!), so Paddy's realisation of his work must be a point of congratulation.

Cavan is not a region with which I can personally claim any great familiarity, for I am ashamed to say that it has served merely as a county which I have driven through in order to reach somewhere else. It has also been somewhat ill-served by Irish botany in that it is one of the Irish counties which has never had a published flora or even checklist produced, perhaps because it lacks dramatic scenery and a sea coast. This defect is now remedied by this attractive paperback.

The book contains a comprehensive historical summary of the contributions of earlier workers in the county. Not surprisingly, botanical field investigations can be divided effectively into the pre-Praeger era, the Praeger era and the 1950 – 2000 era. Praeger's contribution completely outweighs that of his predecessor, but the real meat of this work has largely come from recorders of the past thirty years or so, and particularly from Paddy and his associates in the BSBI over the last twenty years.

There is an introduction to the topography, geology and land use of Co. Cavan, quite comprehensive, but a decent map of the county is something of an omission. An important geological feature is the carboniferous limestone of the north of the county, including some which is exposed as limestone pavement. The 'feel' of the landscapes are transmitted through some nice colour photographs, although the quality of their reproduction is not of the best.

The systematic catalogue of the flora provides the expected bulk of the book. It is interesting as a stranger to peruse the lists and note the balance and make-up of the flora of a county one does not know well. One of the important features is the large proportion of freshwater lakes in the county – part of the great Erne system extends into the county, while Lough Macnean is also shared with adjacent Co Fermanagh. Not too surprisingly, then, one notes the presence of *Hydrocharis morsus-ranae*, *Stratiotes aloides*, *Butomus umbellatus*, *Sagittaria sagittifolia*, *Bidens* spp. and *Sisyrinchium bermudiana* to name a few aquatic and waterside plants, and the *Potamogeton* list is quite healthy, partly owing to the attentions of Chris Preston on BSBI field excursions. There have been some notable recent records of species which had not been seen for some time including *Saxifraga hypnoides*, last previously recorded in 1802 and *Ophrys apifera*, last previously recorded in 1920, while species reported in the county for the first time ever include *Senecio erucifolius*, *Zannichellia palustris* and *Trollius europaeus* – all reports from the 1900s. Several alien species are reported here for the first time also, including *Impatiens glandulifera* which, surprisingly, is still reported as rare in the county. Surprising absentees on the established alien front are the *Acaena* species. Being more familiar with the flora of Northern Ireland, I was also surprised to note the rarity of *Sinapis arvensis*, the absence of *Fallopia sachalinensis* and the recorded presence of only two *Hieracium* species.

The book concludes with a useful topographic index, a bibliography and indexes to scientific and English names (but not to Irish names, which are given with each species account where available). There is a useful list of Areas of Scientific Interest within the county.

All in all, a valuable addition to the regional floristic literature for these islands, and no visitor to the county should fail to take a copy with him (or her) – preferably one that they have purchased!

P. HACKNEY

Wild Flowers of Fife and Kinross. G. H. Ballantyne. Pp. 137. Fife Nature, Glenrothes 2002. Pbk £5.00. (no ISBN)

This handy annotated checklist is the culmination of years of toil. It begins with a brief history of botany in the county and continues with short paragraphs on the geology and landscape, habitat and notable plants, recording methods and the nomenclature used, and a short bibliography is given before the start of main text of the book. The sequence of species follows Kent/Stace order and gives the scientific and common name followed usually with habitat, locality and frequency. A map shows the more important localities mentioned in the text and another shows roads, towns and villages. I am glad to see that a group of plants (stoneworts) rarely covered by floras and checklists has been included as well as a list of casuals with the date last recorded. It is a pity that localities were not given for the plants believed to be extinct so that plant hunters may search for them in the years ahead. Sometimes the author does not adhere to the common names used in Stace e.g. Red Catchfly instead of Sticky catchfly, also *Asplenium* \times *alternifolium* is not the forked spleenwort but a hybrid of it. One or two other common names also deviate from the standard list, e.g. *Sequoiadendron gigantea* is given as Giant Redwood rather than Wellingtonia and *Nothofagus* is given as Silver Beech rather than Southern Beech. Stricter editing could have improved some of the colloquial English "overlooked to a degree; in wet spots; persisting for a spell"; *Persicaria maculosa* was entered twice and sometimes habitats were given and sometimes not. Groups of families are dealt with together so that often genera of different families run into one another and you cannot tell where one family ends and the next begins.

Apart from these minor quibbles there are few errors but some that need mentioning are: *Poa humilis* can be confused with *P. pratense* and not *P. compressa* and both subspecies of *Odontites* should have been mentioned and the *Euphrasia* hybrids have no mention. I was surprised to learn that *Rorippa* \times *sterilis* is more common than either of the parents as the hybrid is rare in the Lothians and I was impressed with the amount of willowherb hybrids, some of which I have not been aware of at all are listed as occasional! The type face is very clear and easy to read and the paper is glossy and of good quality and the cover is attractively illustrated with colour pictures. Over 30 colour photographs illustrate some attractive habitats and notable plants. The book is good value and should grace the shelf of all local botanists and naturalists.

D. R. MCKEAN

Flora of Assynt: Flowering Plants. P. A. Evans & I. M. Evans; *Bryophytes*. G. P. Rothero. Pp 284. Privately published by P. A. and I. M. Evans. Pbk. £15.00 ISBN 0-9541813-0-1.

Assynt is a single parish but this excellent work approaches close to being a county flora in its scope and standards. The parish constitutes roughly 15% of the area of West Sutherland (v.c. 108), and is representative of the whole vice-county having coast, high mountains and very numerous lochs and lochans. The limestone habitats of Inchnadamph make the district especially attractive to botanists, while the shapely peaks of Canisp, Quinag and Suilven draw many climbers.

The flora puts on record a prodigious amount of recording (and walking) carried out since 1988 by the wife-and-husband team of Pat and Ian Evans, besides bringing together the scattered reports of many previous botanists. There is also a very useful account of the bryophytes produced by Gordon Rothero and based almost entirely on his own surveys since 1992.

Both higher plants and bryophytes were recorded on a tetrad basis, so the flora represents a new advance in Scottish botany. Altogether 164 tetrads lie in the parish, contributing substantially to 9 hectads, and the resulting dot maps give a much more complete description of species' abundance and distribution than hectad occurrence and subjective frequency descriptors could achieve. A useful feature is the text accompanying the dot maps that states succinctly the species' habitat preferences as observed during the Evans' recording. There are some surprises even to this North Scottish reviewer, albeit one who operates on the other side of the country; thus *Campanula rotundifolia* was found in only 8 tetrads, mainly new road verges, and *Ajuga reptans* and *Sonchus arvensis* are very rare.

The introductory part of the flora comprises about a fifth of its length. It provides 25 colour photographs of landscapes and habitats as well as coloured contour and geological maps that will be helpful to many readers. The text is well written but somewhat patchy: there are good accounts

of vegetation types, climate, and the current survey (its timing and technique), then a considered analysis of the apparent recent gains and losses in the flora, while geology is given superlative treatment (some might say excessive). But grazing, the other main factor shaping the flora, gets just scattered mentions (p. 25 - sheep numbers dropping in crofting areas, none of the other estates have livestock (but we are not told about the main estate(s)), p. 28 - many islands grazed till quite recently, p. 29 - browsing severely restricts woodland regeneration, p. 31 - sheep now virtually confined to areas under crofting tenure but still a large population of red deer, p. 102 - increased grazing may be responsible for *Parnassia palustris* being lost from former sites and now occurring in only 1 tetrad). A consolidated section on the present agriculture and sporting management would have been desirable, with an indication of the densities of sheep and red deer and perhaps a map of land holdings.

Other irritations are the lack of precise grid references in the main flora (although six-figure references were obtained) and the general non-naming of places of occurrence. The flora plan says that record details are given only for species with 6 or fewer tetrads, but wisely the authors do not rigidly adhere to this, e.g. for *Phyllitis scolopendrium* (7 tetrads). But other rare and scarce species could have benefited, for example *Carex rupestris*, *Galium sternerii* and *Potamogeton berchtoldii* (each with 9 tetrads), which will be hard to find without more precise details. Space for this information could have been created by the omission of some dot maps since around a hundred show only 1 tetrad, and by the dropping of some text on first records. It is a quirk of the interests of past botanists, and the authors' rigid definition of reliable records, that so many widespread species, e.g. *Digitalis purpurea*, *Holcus lanatus*, *Juncus effusus* and *Trifolium repens* (each with c. 130 tetrads), should be "first recorded in the 1950s survey"; this may confuse some readers and obscures real colonisation, e.g. by *Epilobium brunnescens*. By and large these are minor reservations and I congratulate the authors on so speedily completing their enterprise and providing a flora that deserves to sell well.

Finally, I reflect on whether the production of this type of flora should be generally encouraged for upland Britain. In my opinion the first priority for the few botanists in remote regions should be to produce accounts for all vice-counties, and only special areas will justify the present intensive treatment, Breadalbane and Ben Lawers being another possible example. Hopefully workers as well organised and dedicated as the present team will not all flock to the Meccas, but rather will help level up the existing uneven botanical coverage.

D. WELCH