Book Reviews

The pollen loads of the Honeybee. A guide to their identification by colour and form. Dorothy Hodges. Pp. 51 & 14, with 10 colour plates, 30 black & white plates and 7 text figures. International Bee Research Association, London. 1984. Price £26.50 (ISBN 0–86098–140–1).

This is the second facsimile edition of a remarkable book that was first published in 1952 and was designed to provide a practical manual for the identification of pollen loads gathered by honey bees. As the authoress explains, the colour of a pollen load is indicative of the kind of plant from which the pollen originated. The strength of the book lies in the colour charts showing the colour of pollen loads collected from 120 different plant species. For most species three different pollen loads are illustrated, so that the natural colour variations, greater in some species than others, are indicated. The colour charts are arranged in six full-page plates in the order of flowering, to assist in the identification of pollen loads during the different seasons of the year. A further five plates of colour paintings show the processes by which bees collect and pack pollen loads and the colours of artificially produced pollen loads. There are also 30 pages of line drawings depicting the pollen grains of the most important sources of food for honeybees as seen in the light microscope. These drawings are reminiscent of those in the classic textbook on pollen by Wodehouse (1935). This is largely because they depict intact pollen grains which have not been subjected to the treatment with strong acids prevalent in palynological laboratories. As such they may serve as a practical means of identifying some of the more distinctive types of pollen with a relatively modest microscope.

The book has been revised to include a chapter, previously published elsewhere, on the methods of melissopalynology. This is undoubtedly a useful addition for those wishing to pursue the subject in a practical way but would have been better placed after the plates, since the stark style contrasts dramatically with the much more readable text of the book itself. A more useful revision would have been to have updated the literature references given. The classic textbooks concerned with the identification of pollen are mentioned, but most have passed through several editions more recent than those listed. Perhaps, more importantly, several new books could then have been included which provide keys and illustrations for identification. Recent works by Moore & Webb (1978) and Sawyer (1981), for example, contain keys and micrographs and are both modestly priced.

It may be hoped that such information will be included in a future edition, since there will be a continuing, and perhaps even a growing, demand for this unique book from bee keepers, pollination biologists and palynologists.

REFERENCES

Moore, P. D. & Webb, J. A. (1978). *An illustrated guide to pollen analysis*. London.
Sawyer, R. (1981). *Pollen identification for beekeepers*. Cardiff.
Wodehouse, R. P. (1935). *Pollen grains* [*etc*]. New York & London.

S. Blackmore

The Longman illustrated dictionary of botany. A. Sugden. Pp. 192, with 300 coloured diagrams. Longman & York Press, Harlow, Essex & Beirut. 1984. Price £3.95 (ISBN 0–582–55696–1).

This reference book intended for amateur botanists and students of botany stands up to the publishers' claim that it defines clearly and simply both terminology and concepts used in the study

of plant life and plant sciences. More than 1200 definitions are written in non-technical language and illustrated by 300 diagrams, most of which are in good colour with a few in black & white. It does not have the alphabetical arrangement customarily associated with dictionaries; but once the system is grasped in which the words are grouped in related topics as used in study courses, a comprehensive (alphabetical) index then leads to the section required.

There is a wide coverage of subjects relating to plants, some 23 headings including: flower biology and anatomy, development from seed or spore to mature plant, evolution and spread of a species and adaptation to habitat, habitat definitions, basic chemistry of plants, and a review of the plant kingdom. Appendix one is 'Understanding botanical words' and Appendix two is 'SI Units'.

The suggestion for the B.S.B.I. to review this book came from an amateur member, who recommended it; a Museum assistant scientific officer, taking Botany 'O' Level, evaluated the Dictionary as being useful for his studies; a senior taxonomist, checking for accuracy, reported this good in general, but found that the definitions of cyme and raceme do not distinguish between the position of the oldest flower, which makes the inflorescence determinate (cyme) or indeterminate (raceme); also the term strophiole is not included (although the page on seed structure does include definitions of hilum, micropyle and raphe). However these test words are possibly severe, as in general this clear, compact and handy reference book will doubtless be very useful for those for whom it is mainly intended: amateurs, sixth formers and first year undergraduate students.

M. Briggs

Leaves. G. T. Prance & K. Sandved. Pp xii + 244, with 310 colour photographs and 46 black & white illustrations. Thames & Hudson, London. 1985. Price £22.50 (ISBN 0–500–54104–3).

This lavish book is the result of co-operation between representatives of two famous botanical institutions in America: the text, accurate, as would be expected, is by G. T. Prance, Senior Vice-President for Science at the New York Botanic Garden; the spectacular photographs are by Kjell Sandved, of the National Museum of Natural History, Smithsonian Institution, Washington, D.C. It is an 'eye-opener book' – exploring leaf form and function from a world-wide selection and from many angles, including shape, arrangement and colour – with much information that will be new to general readers, and with stunning photographs to illustrate the sheer beauty and diversity of leaves. There are sections on leaf margins, venation, hairs, prickles and poisons; dramatic sections on modified leaves, leaves as propagules, on carnivorous and on succulent leaves; also on those which carry spores, those patterned by leaf-miners and other predators, or those on and in which insects are sheltered; on leaves useful to man; and finally on fossil leaves. The last chapter gives brief advice on leaf collecting and making a herbarium, with appendices on cleaning, staining and leaf prints, and finally philately.

Throughout, the beauty of leaves, of magnified leaf parts and the arrangement of the leaves on a plant as well as of the whole leaf, is the main theme of the illustrations. The book is expensive; but if you have a small coffee table waiting for a book through which one can browse and obtain much visual pleasure and unexpected facets of knowledge on a very functional plant organ that is widespread in the natural world, this would be the book for you.

M. Briggs

Guide to standard Floras of the world. D. G. Frodin. Pp. 619. Cambridge University Press, Cambridge. 1984. Price £95.00 (ISBN 0–521–23688–6).

This remarkable book provides a critical guide to the published work that is available for the identification of flowering plants and ferns throughout the world. The term 'standard floras' is used in the sense coined by V. H. Heywood in connection with the *Flora Europaea* project, i.e. the best works currently available for those seeking information about the plants of any country or similar area. The Guide is authoritative, well arranged and clearly the fruit of a prodigous amount of hard and, one suspects, often unrewarding labour. It takes the form of a select bibliography with

annotations in which the works are assessed, almost invariably as a result of the author's own careful examination of the contents. Those who know the author will not be surprised to find that this is no mere juggernaut of bibliographic drudgery, but rather is spiced with informed comment and some idiosyncratic touches that enliven the text. In short, in addition to fulfilling its primary function as a practical guide to prospective Flora users, it is a book that anyone with an interest in floristics or botanical literature can browse in for many hours with considerable enjoyment.

The data are very firmly structured under nine major divisions covering the major continental regions, after which follow sections on the various countries and other territorial aggregations. Chapter headings are accompanied by delightful quotations that reflect the aspirations, achievements and failures of botanical authors. The treatment is exhaustive and highly detailed. Thus, under the British Isles, we learn that the latest work covering Scotland as a country is W. J. Hooker's *Flora Scotica* of 1821, and there is even an entry for Rockall (for which no vascular plants have been recorded). British botanists should note that coverage at the British county Flora level is not provided, a possibility obviously precluded by the world-wide objectives of the book. The geographical breakdown is preceded by three extremely interesting chapters that survey the range of publications that are available, the progress and prospects of Flora writing since 1939, and general considerations on the style of Floras. All those engaged in Flora writing or contemplating initiating projects of this kind should study these essays with care. If more thought were given to what Floras are actually 'for' and how perceived needs can best be met in the real world, botanical libraries would have fewer sad, rusting hulks of major, but over-ambitious works, some of which expired with a bang of recriminations in a glare of publicity, while others subsided in obscurity with scarcely a whimper.

In short, this is a major, highly practical work of reference that should be in all libraries with any pretence towards coverage of botanical taxonomy and related topics. The tone of this review has been deservedly enthusiastic but, sadly, two rather serious reservations must be made. The first is that the cut-off date for entries is 1980, while the publication date was late in 1984. Obviously, it is highly desirable that works of reference should be as up-to-date as possible and, while no doubt difficulties existed, such as the author's present location at the University of Papua New Guinea, four years in press is grossly excessive, even for a publication as complex as the Guide. The book is beautifully designed and produced and is worthy of the best traditions of the Press, but can it possibly justify the staggeringly high price of £95.00? Basic working tools of this kind are especially valuable in the developing areas of the world and in the less well-endowed libraries. One cannot but fear that the cost will preclude its use in many situations where it would be of the greatest value, while the major and more affluent libraries will be held to ransom, and individual purchases will be limited to the very well-heeled. As I have said, this is a very nicely produced book, but it is in no way a luxury publication. Surely it could have been produced more cheaply so that this, coupled with the prospects of wider sales, could have brought the price down? Otherwise, it is difficult to interpret the pricing policy other than as a cynical exploitation of the major scholarly libraries as a captive market, and this is an attitude that one is loath to attribute to such a very distinguished publishing house as C.U.P.

J. F. M. CANNON

Flowers of the Himalaya. O. Polunin & A. Stainton. Pp. xxx + 580, with 128 colour plates, 74 pages of line illustrations, an illustrated glossary and 2 maps (end papers). Oxford University Press, Oxford. 1985. Price £29.50 (ISBN 0–19–217623–4).

The increasing number of B.S.B.I. members who visit the Himalaya on tours should find this long-awaited book of interest, and indeed for many it will be required reading. It is the first popular guide to the flora of the Himalaya, from Kashmir and Ladakh to the Nepal-Sikkim border in the east. Polunin and Stainton have collaborated well in producing a layman's account which retains botanical accuracy.

It is based upon the *Enumeration of the flowering plants of Nepal*, prepared by the British Museum (Natural History) in recent years, and so adopts current taxonomic treatment and nomenclature. Inclusion of a few more synonyms would have been helpful, especially to Indian

readers who still follow Hooker's *The Flora of British India*, though this is hardly within the scope of a 'popular' guide. Some 1500 species are described, found mostly above 1200 m in the upper valleys, and in the hills and mountainous regions up to 5500 m. Naturally this is not a Flora, as only a selection of the estimated 9000 species supported by the area covered, can be represented. The 690 colour photographs are generally of a high standard and compare with Polunin's European guides, though inevitably a number are disappointing. Ann Farrer's 315 line drawings add much to this work, being accurate and providing an attractive illustration of a wide variety of families; the inclusion of individual flowers or fruit in detail is to be commended. There is an informative account of where to go plant-hunting in the Himalaya, and at what seasons of the year. Brief descriptions of the influence of climate, geology, soils, altitude and man on the flora are given. A clear glossary of terms will aid the beginner.

The book appears remarkably clear of errors in both original content and preparation. Some of the upper altitudinal limits are incorrect, but this is a reflection of scanty and sometimes inaccurate entries on herbarium sheets.

Oxford University Press have settled on an acceptable price on this occasion (cf. *Flowers of Greece and the Balkans*), but publishers should note that this is very much the upper limit to which even the enthusiast is prepared to stretch.

The authors are to be congratulated on an excellent book which will prove to be a standard reference for decades to come, as it succeeds in covering the common and attractive species encountered by a visitor. A. Stainton is currently preparing a supplementary volume, which will fill in many gaps and give a better representation of the subtropical flora of the region.

C. A. CHADWELL

Wild flowers of the Yorkshire wolds. Sylvia M. Arnold. Pp. 85, with 14 black & white photographs and 6 text-figures. Hutton Press Ltd., Beverley, East Yorkshire. 1985. Price (soft cover) £2.95 (ISBN 0–907033–25–3).

The Yorkshire wolds is an attractive area with a rich flora about which little has been written. This small book contains chapters on the various habitats with short lists of species for each. Under the heading 'Facts and Fiction' are given interesting items of information for selected species, including their former medicinal and other uses. There is also a chapter on conservation.

The selection of species to be mentioned in the book appears to be arbitrary. Some rarities are included, whilst species characteristic of wolds habitats and widely distributed receive no mention, notably *Picris hieracioides*, *Galeopsis angustifolia* and *Koeleria cristata*. A few grasses are included, but only one sedge and one rush, so that some of the most interesting species of spring-fed marshes are omitted.

There are minor criticisms and some queries: the Butterfly Orchid that is rare in wolds woods is *Platanthera chlorantha* and not *P. bifolia*. If *Polygala calcarea* has been found on the wolds, extending its known range by sixty miles or more, as recorder I would welcome information; likewise, if there are authentic records for *Dactylorhiza praetermissa* × *D. purpurella*, I should like to know of them. And does *Veronica filiformis* really occur on field margins?

This attractive, well produced book, nevertheless makes interesting reading and is a useful guide to the habitats and wild flowers of the wolds, particularly for the beginner and visitor.

F. E. CRACKLES

How to make a wildlife garden. J. C. Baines. Pp. 192, with 70 colour photographs and 10 line drawings. Elm Tree Books, London. 1985. Price £8.95 (ISBN 0–241–11448–9).

This apparently simple book does more than fulfill its avowed purpose, it introduces a number of important ecological ideas to the general reader and makes a useful practical handbook for botanist-gardeners. Chris Baines' breezy and colloquial style is surprisingly adaptable; directions

and explanations are notably clear, and narrative parts are lively and expressive, rising even to eloquent rhetoric on occasion.

Now that our flora and fauna have to contend with rural as well as urban wastes, it is all the more important to promote the idea of wildlife gardens, particularly for some meadow plants and for creatures such as newts and frogs, and butterflies. Many misconceptions are demolished in the course of this book – that a garden for wildlife is necessarily unkempt and scruffy, for instance, or that simply scattering a packet of wildflower seed over a waste patch will ensure a wildflower garden. Dispensing firmly with the idea that all wild plants behave like invasive weeds, the author explores the preferences of a wide range of species and brings all his skills as a landscape architect into his suggestions for a wild garden.

He shows how even a small garden can contain several habitats, attractive to plants and animals (including human ones). His 'cottage garden service station', close to the house, includes many nectar-rich plants and feeding places for winter birds. A meadow patch, however small, is good for plants, insects and small mammals; and Chris Baines suggests that after the late summer cut, one gives a garden party to achieve the trampling effect of grazing animals – the *only* way to get Yellow Rattle (*Rhinanthus minor*) to self-seed, he avows. A pond is not only desirable but also practicable, if one follows the useful instructions outlined here for making a pleasantly naturalistic one (no crazy paving edges) with grassy slopes to it and a marshy area. There is a useful tip about drip-filling, borrowed from Arab horticulturalists. The woodland edge habitat contains Primroses, Red Campion, Bluebells and Foxgloves as well as some more unusual plants. (From my own experience I would sound a cautionary note about planting Oxlips in proximity to Primroses, for though you get some remarkable hybrids, the Oxlips seem to disappear after a few years). It is good to find that a vegetable patch has a place in this wildlife garden, reinforcing the idea that, in a balanced environment, food plants suffer no more depredations than in any other garden – perhaps fewer.

There are sensible notes about the provenance of bought wildflower seed, on collecting seeds and cuttings, and on growing wild plants, and a useful appendix of societies and nurseries. Throughout the book there is an awareness of the wild garden as a part of a wider system. Larger mammals may come to feed (Chris Baines saw a muntjac one morning in his garden, not many miles from Birmingham city centre), and a place to feed and roost could be a matter of life or death for winter birds, or a vital link in the life cycle of a butterfly or moth. While its specific concern is to encourage people to be active on their own patch, this book looks also to the natural history over the garden wall, and further abroad.

F. GREENOAK

Index Filicum – Supplementum quintum pro annis 1961–1975. F. M. Jarrett, with T. A. Bence, J. W. Grimes, B. S. Parris & J. L. M. Pinner. Pp. 245. Clarendon Press, Oxford. 1985. Price £25.00 (ISBN 0–19–854579–7).

Indices that give the original place of publication of plant names are essential tools of trade of the taxonomist. The most familiar of these to flowering plant botanists is *Index Kewensis*, which was launched in January 1882 by the then Director of Kew, Sir Joseph Hooker, who employed B. Daydon Jackson to start work on the project. The work, initially published as two volumes (1893, 1895), with subsequent Supplements published at five- to ten-year intervals, listed all generic and specific names of flowering plants from those of Linnaeus onwards together with their places of publication. Thus *Index Kewensis* set the style for other lists of plant names and stimulated the Danish pteridologist Carl Christensen to compile a similar list of fern names (*Index Filicum*; 1905–06) and later Supplements (1913, 1917 and 1934). The fourth Supplement, covering the years 1934 to 1960, was prepared by a committee of the I.A.P.T. and published in 1965 (*Regnum Vegetabile* Vol. 37).

The book under review is the Fifth Supplement and is again the work of the staff at Kew under the direction of Dr Frances Jarrett, who had maintained at Kew a running index of all fern names published since January, 1960. What is more, she wisely included in her index all pteridophytes (Lycopodiopsida, Equisetopsida, Psilotopsida); in this supplement, and for the first time, the

names of fern allies are included. They had hitherto been published separately, at different times, and by different authors. Infraspecific names are not listed except where they provide the basionym for a new name. All entries are cross-referenced to their basionym or the name from which they derive, whilst each basionym is cross-referenced to the name which is derived from it. Like the Fourth Supplement, it is not a nomenclator making taxonomic decisions on synonymy, as did the original work. Preparing a work of this nature for the press is tedious and time-consuming, but this book has been carefully and consistently edited. The compilers have included all papers that have arrived at Kew, and we hope and believe that very few containing new taxa have been missed. Any papers missed in Supplement Five will be included in Supplement Six.

If such works are to be effective they must be the result of an ongoing project, as indeed this now is. Like so many long-term and on-going data files, it lends itself to electronic retrieval/printing techniques. Publication is already ten years behind, and we must hope that more resources can be released for this important work so that the sixth Supplement does not take so long to edit and publish.

A. C. JERMY

Med-Checklist: a critical inventory of vascular plants of the circum-Mediterranean countries, 1 Pteridophyta (ed. 2), Gymnosperms, Dicotyledons (Acanthaceae – Cneoraceae). W. Greuter, H. M. Burdet & G. Long (eds). Pp. c + 330. Conservatoire et Jardin botaniques, Geneva & Secretariat Med-Checklist, Botanischer Garten & Botanisches Museum, Berlin–Dahlem. 1984. Price Sw Fr 98.00 (ISBN 2–8277–0151–0; 2–8279–0004–1).

The preface to this book (in both English and French) explains that the Med-Checklist scheme was set up in 1978 under the auspices of the European Science Foundation and placed under the scientific authority of the Organization for the Phyto-Taxonomic Investigation of the Mediterranean Area (OPTIMA). Most of the compilation is carried out in three centres: Berlin, Geneva and Montpellier, with data derived from a network of regional and national advisors.

Families, genera, species and subspecies are the only formal taxonomic ranks recognized, although the 'aggregate' (informal grouping for convenience) is used. All countries bordering the Mediterranean Sea, together with Portugal, Bulgaria, the Crimea and Jordan, are included. This area is divided into 27 territories, of which the European coincide with those of *Flora Europaea* except for Malta, which is recognized separately from Sicily. The others are the East Aegean Islands (all the Greek Islands not covered by *Flora Europaea*, but included in *Flora of Turkey*), Algeria, Asiatic Turkey (Anatolia), Cyprus, Egypt, Israel and Jordan (combined), Libya, Lebanon and Syria (combined), Morocco, Sinai and Tunisia.

The checklist gives taxa in alphabetical order, and assigns each a complex unique reference number. Authorities and places of publication are given (including the synonyms). The countries are listed across the landscaped page in sequence around the Mediterranean approximately clockwise, starting with Portugal and ending with Morocco. Occurrence of the taxa is marked by a '+' sign, in the appropriate column(s). The work ends with a list of basic Floras, additional references and an index of scientific names.

This work will obviously be an essential work of reference for many botanists, not only for those interested in the Mediterranean; for it covers the whole territory of the countries considered, e.g. all France, not just the Mediterranean part. It is backed up by a series of notulae published at intervals in the periodical *Willdenowia*. These contain many new records and an alarming number of new names and combinations (many sadly lacking any explanation or discussion). Some of the nomenclatural changes are alarming, and the genus *Quidproquo*, a nomen novum with the species *Q. confusum* for *Raphanus aucheri*, is surely the way to give taxonomy a bad reputation.

It is unfortunate that the work is retrograde in that it lumps together all the recent splits from *Lycopodium* which do seem to have gained acceptance. On the other hand A. J. Scott's radical splitting of the Chenopodiaceae is recognized, including therefore the genus *Blitum* for the red-fruited *Chenopodium* species. There is a considerable number of unnecessary deviations from *Flora Europaea*, which cannot help towards a stable nomenclature and will certainly upset the

horticulturalists, weed scientists, etc. Some contributors might be seen to appear obsessed by the number of times their name appears as the authority following a taxon.

It should be mentioned that an earlier version of the Pteridophyta alone was published in 1981, in paperback format, and distributed free to members of OPTIMA. A substantial revision of this group proved necessary and it has been republished as a second edition in this volume. It is to be hoped a second edition of the rest will not be necessary, especially as the work costs 98 Swiss Francs (about £32), and a further five volumes are planned. Many of us eagerly await these, as such a vital checklist is long overdue. The work can be obtained from: The Med-Checklist Secretariat, Botanischer Garten & Botanisches Museum, Berlin–Dahlem, Germany BDR.

S. L. JURY

Plant chemosystematics. J. B. Harborne & B. L. Turner. Pp. x + 562. Academic Press, London & Orlando. 1984. Price £65.00 (ISBN 0–12–324640–7).

As the authors point out in their Preface, this book can be considered to be a revised version of Alston & Turner's *Biochemical Systematics*, published in 1963. *Plant Chemosystematics* covers the same field and attempts to review its state and potential up to the end of 1982; it includes two of the opening chapters from *Biochemical Systematics*, but most of the book is entirely new.

The first four chapters of *Plant Chemosystematics* are introductory. Chapters 1 and 4 are brief discussions of the uses, advantages and disadvantages of chemical and biochemical characters in plant systematics. Chapters 2 and 3, dealing with taxonomic and evolutionary principles and perspectives, are reprinted almost without change from *Biochemical Systematics*; they were excellent in the context of 1963, but, as elsewhere in the book, modern views of population structure and the role of selection are not reflected. Chapter 5 opens the major chemosystematic section of the book with a useful but sometimes rather dated account of plant scents and odours, a rather diverse group of volatile compounds with a variety of functions. As in other chapters, most of the material is based on earlier reviews and is in part outdated as a consequence; the section on terpenoid scents and odours is particularly unfortunate, with references to routine techniques of the late 1960s and a 'recent' review published in 1975. Chapters 6 and 7, valuable surveys of alkaloids, some other plant toxins, and plant pigments, are more satisfactory in this respect. Chapter 8, rather misleadingly entitled 'Hidden Metabolites', deals with fatty acids and some other lipids, wax alkanes, polyacetylenes, sugars, and some related compounds. As elsewhere, the impossibility of covering the whole field to everyone's satisfaction is clear; there are, for example no references to the biochemical functions of sugar alcohols and cyclitols.

Chapters 9 to 13 return to a major theme of *Biochemical Systematics*, the use of micromolecular (chemical) characters in studies of plant populations and intraspecific variation, interspecific hybridization, and relationships between species, genera and families. Systematists will find these chapters valuable, although there are, as elsewhere, occasional lapses (for example, nomenclatural confusion in *Baptisia* on pp. 322–323, and the description on p. 309 of the Psilotaceae as "a non-flowering taxon which first appears in the fossil record during the early Palaeozoic"). More cross-references between chapters are needed. Chapter 14, dealing with the comparative biochemistry of metabolic pathways, is interesting but sometimes rather dated (most recent references for lysine pathways 1974, C_3 and C_4 photosynthesis 1978, CAM 1978). Chapter 15, dealing with phytoalexin variation, and Chapter 16, on the analysis and interpretation of chemical data, are brief but useful.

Chapters 17 and 18 deal with the use of macromolecular data from proteins and nucleic acids. The accounts of each topic are relatively brief but provide a good introduction, with references to recent reviews, though not to the excellent symposium edited by Jensen and Fairbrothers (*Proteins and Nucleic Acids in Plant Systematics*, Springer-Verlag, 1983), which appeared too late to be included. There are a few lapses; for example, few biochemists would describe cytochrome c as an enzyme (p. 395 sqq.).

This book cannot be unreservedly recommended as a guide to plant chemosystematics, but it does provide an excellent introduction to many aspects of the subject, with useful evaluations or interpretations of many points. The authors have relied on reviews for most of their general

coverage, and as a result much recent work has been omitted. Nevertheless, this book will be a valuable basic reference source to those with access to a copy; unfortunately, its extremely high price will deter sales even to the best-financed libraries.

Q. O. N. KAY

The living Earth. C. Back. 4 parts: 1. Plants and simple animals; 2. Animals with many legs. Animal homes; 3. Animals with backbones; 4. Our planet. Pp. (each) 4 × 64, with numerous colour and black & white photographs and illustrations. A. & C. Black, Ltd., London. 1985. Price (per volume) £4.95 (hardback) (ISBN 0–7136 (all): 2263–6, 2265–2, 2267–9, 2269–5); £2.95 (paperback) (ISBN 0–7136 (all): 2264–4, 2266–0, 2268–7, 2270–9).

These children's books, which have beautiful cover photographs, present a great deal of information in simple form and contain many suggestions for experimentation and investigation by the reader.

However, it is most important that instructive literature for children, as well as being simple, should be accurate. Not every parent, teacher or nanny is able to assess the worth of a scientific book, and it does no service to a young mind to give it wrong or only partly correct information. In these books there are many careless, inaccurate or oversimple statements which may seriously mislead. Some examples are:–

> ". . . during the day and night, plants and animals take in oxygen and give out carbon dioxide. This is called *respiration*." – "Tubers are swollen stems which grow on the roots. Potatoes are tubers." – "Every fertilised flower can develop into a fruit or cone" – "Living things which aren't plants *must* be animals". – "Molluscs – is the word used to describe animals with shells".

The drawings are large and clear but contain mistakes and inaccuracies, for example an ivy plant attaching itself to a wall with roots half as long as the leaves. The fern called *Dryopteris* on p. 22 is shown with peltate indusia, and on the same page the captions for Hart's-tongue Fern and a drawing which is intended to be Broad Buckler Fern are reversed. No idea of scale is given – an *Amoeba* is a quarter of the length of an earthworm illustrated on the same page; similarly *Planaria* and a leech are the same size. There are also a number of spelling mistakes, for example "dulce" for dulse and "scull" for skull!

There is a commendable emphasis on conservation – most of the time. One is enjoined not to pick a leaf or gather a moss, but "if you ever keep tadpoles in a bowl don't forget to put in a stone"!

The final part of *The living Earth, Our planet*, which deals with climate, geology, physical geography and so on and which ends with a sensible plea for conservation on both a local and a global scale, seems better than the others.

I am unable to recommend these books, although they are very well produced with clear drawings and good photographs and look most attractive.

A. LEE

Flora of Jersey. Frances le Sueur. Pp. xlii + 244, with 18 colour plates, 18 black & white illustrations, about 600 distribution maps and 8 maps of physical features. Société Jersiaise, St Helier, Jersey. 1984. Price £17.50 (plus £1.50 p. & p.).

The spice of the floras of the various Channel Islands is their remarkable differences (in animal life too), united though they are by an abundance of special plants – and the absence, or rarity, of others common north of the Channel, another aspect of their differences.

These differences are evidenced in this welcome work by a line after each species summarizing its frequency in the other main islands, as was done in *The wild flowers of Guernsey*, but here is updated. Thus this Flora is a useful guide in the other islands as well.

But of course it is the native and naturalized plants of the largest of the islands that are so well dealt with here. For 30 years or more Mrs le Sueur has been the indefatigable leader of the botanical section, which she revitalized, of La Société Jersiaise. Moreover, she had the advantage of close

personal contact with her two most important predecessors, T. W. Attenborough, who had worked on the flora since 1911, and the contentious, curious, Frère Louis-Arsène, with his troublesome herbarium (see *Watsonia* **14**: 167–176, 1982). She organized the island mapping scheme from 1960–1970, which produced the dot maps of all the main species. This is a feature lacking from *The wild flowers of Guernsey* (although such maps existed and were used in writing the text). It is better also in its telling half-page photos, by her elder son, of various parts of the island; and, most strikingly, in its decorative colour plates. It is no mean feat to have produced this Flora with so many of these for so low a price. The whole production looks good, and is good.

The whole-page maps at the end are not all of real use. Most have few names on them and some, e.g. hedgerows and farmland, none at all. The awful gap in this book is of any map showing the numerous places that are mentioned in the text, which renders some of it relatively unhelpful. It is small excuse to suggest that readers should buy an Ordnance Survey map, which inevitably fails to serve the purpose for the opposite reason: there are too many places marked.

Mrs le Sueur is a scholarly, all-round naturalist and has shown great shrewdness in assessing the facts, which are right up to date, of the 1500 or so taxa treated. I can hardly imagine the job being better done. The book is a thoroughly reliable source, a pleasure to browse into, and warmly recommended.

D. McCLINTOCK

A simple field key to common British wild flowers. S. M. Arnold. Pp. 125, with 12 plates and many text figures. Lockington Publishing Co., Ltd., North Ferriby, East Yorkshire. 1983. Price £5.00 (ISBN 0–905490–23–1).

I approached this volume in the hope that it would be a very usable key but found it disappointing. Its main problem to my eyes is that it is extremely eclectic without saying so. There is a glossary that is fair, with useful illustrations. The Key, which forms the body of the book, is well laid out but suffers badly from the fact that in only a few cases are you even given a hint that there may be plants other than those mentioned. If one, for example, tried to run down Fringed Water-lily (*Nymphoides peltata*) with this key, it comes out as Yellow Water-lily (*Nuphar lutea*), and there is no hint that this identification may not be correct.

There is a good index of combined English and Latin names, with cross-referencing; but of course it refers only to the plants included. There are twelve half-tone plates of variable quality, and here we find a bad discrepancy. The plates have no legends; for identification of the plants depicted one must turn to the plate index, where each half plate is indicated as simply 'a' or 'b'. These letters, however do not appear on the plates, and the plants indicated are inconsistent, e.g. Pl. 1*a* is the top plant whereas Pl. 3*a* is the bottom one. There is a real need for a simple illustrated key to common wild flowers in Britain, but unfortunately this book cannot be recommended as such.

J. M. MULLIN

The Cambridge encyclopaedia of life sciences. Edited by A. Friday & D. S. Ingram. Pp. 432, with numerous colour and black & white illustrations and line drawings. Cambridge University Press, Cambridge. 1985. Price £25.00 (IBSN 0–521–25696–8).

As science has become more and more the province of the specialist, we have seen in recent years a number of books that attempt to give an overview of current thought in the subject. The *Cambridge encyclopaedia of life sciences* is the latest and one of the best of the genre. Compiled by a panel of distinguished contributors, mainly but not entirely working in Cambridge, it covers, in the first part of the book, the natural sciences in a progression from the cell and its work through to the behaviour and ecology of living things in general. The second section is on environments and takes the topic from biogeographical zones to the living organism as host for others. The third section is concerned with evolutionary processes and their results as seen in the fossil record down to recent times, and the final pages give a classification of living organisms.

In such a synthesis, and particularly one that concentrates on processes rather than objects, the treatment is bound to be uneven. There is far more detail, for example, on cells than on the environments that they ultimately form, which often have to be dealt with very superficially. The list of further reading at the end of each chapter in general provides suggestions for filling in the inevitable gaps, but does not provide a single title that would enable a serious student to pursue an interest in coral reefs, to note but one such omission.

The question as to whom such a book is directed is perhaps answered when one glances at the text, where certain words, particularly in the early sections, stand out in heavy type. These are difficult or key words that a student might underline in his notes; and it is probably such readers who will make most use of this book, which for VIth formers and perhaps undergraduate students gives an excellent statement of our current knowledge and opinions of the world about us. Librarians in schools and colleges should find it in great demand. The more general reader might hesitate before spending £25.00, but would find that the basic text, backed up by the many beautiful coloured illustrations and excellent diagrams should give him pleasure as well as information. The botanist pure and simple might feel hard done by, as plants certainly get a smaller percentage of space than they should, perhaps, warrant. Their importance is mentioned in many places but is rarely described in detail; and although one of the editors is a botanist, the zoologists seem to have called the shots. Perhaps this is inevitable, but it would be nice to see a book of this kind in which the plants got a fair crack of the whip.

J. POPE

Guide des fougères et plantes alliées. R. Prelli, with the collaboration and drawings of A. Prelli. Pp. 199, with 79 figures and 3 tables. Éditions Lechevalier, Paris. 1985. Price not given.

For too long France has had no up-to-date account of its pteridophyte flora. Those works that were published in the past have long been virtually unobtainable and of course way out of touch with the taxonomic advances of the past few years. All this makes the appearance of this neatly packaged volume most welcome.

This book is really a slim field guide. The 199 pages make up a book only 14 mm thick including the hard cloth binding. It is not a 'coffee table' book, but a practical fern flora of France, adequately supplied with workman-like drawings and photographs to demonstrate diagnostic characters. In style therefore it is not unlike *Welsh Ferns* (Hyde, Wade & Harrison 1978), although, unlike that book, the balance is towards more illustrations and less text.

Introductory chapters cover the biology of ferns and their classification, reproduction and evolution. The order of species roughly follows that given in *Flora Europaea* but differs in detail. More significantly the Filicales are here treated as one group and not subdivided into the several well known family names, e.g. Hymenophyllaceae, Aspidiaceae, etc. This approach is taken, perhaps justifiably, while botanists sort out and agree on one classification. However, I found the lack of structure to such a large section of the book confusing. Furthermore the arrangement of entries is inconsistent – sometimes a heading and generic characters are given before a section, e.g. *Asplenium* and *Dryopteris*, but more often not, e.g. *Cheilanthes, Hymenophyllum* and *Gymnocarpium*. In the chapter on ecology, most interesting tables of altitude and pH preferences are given for selected species. It would have been fascinating to see all taxa included in these tables.

Within the systematic section of the book, many features will be of particular interest to the British botanist, as the emphasis is on recognition of each taxon – it is not a guide to localities. Clear drawings are given to show differences between the stems of *Diphasiastrum alpinum* and *D. issleri*, among others. Within the genus *Asplenium*, differences between *A. obovatum* (recorded from the U.K. in error) and *A. billotii* and between *A. adiantum-nigrum* and *A. onopteris* are well illustrated. Also, differences between *Polystichum setiferum*, *P. aculeatum*, *P. braunii* and *P. lonchitis* are clearly defined by photographs and line drawings. I found the photograph of *Dryopteris remota* particularly welcome – I now know my spore-raising under this label was not successful! This is one of the few relatively widely distributed hybrids that are illustrated; other rarer ones are simply listed at the end of each genus.

I was sorry to see that the familiar *Cystopteris alpina* has been placed under *C. atrovirens*. This is probably a legitimate change, but there are already too many changes going on – especially among the ferns. A good example of this is the recent and highly confusing revival of *Polypodium cambricum* for *P. australe*. *P. cambricum* is used here as in recent British books – all on the basis of a sterile variety named by Linnaeus which occurred probably only once in the wild. If this name must be used for the Southern Polypody should it not be qualified by adding 'var. *australe*'? Another controversial taxa included here is *Cystopteris dickieana*. This is not a fern widely grown in gardens all over the temperate world originating from the Kincardine coast, but the type with spores somewhat similar to those of the Kincardine plant. In such a difficult genus is one approximating character sufficient to allow two morphologically distinct forms to be joined into one species? For me *C. dickieana* is still endemic to the British Isles.

While protecting *C. dickieana* as one of our very few endemic fern species, it is perhaps appropriate to comment that the North-west European *Hymenophyllum wilsonii* is here recorded as occurring in Africa, Australasia and America. This is not an unusual statement but it is not true. South African plants are placed under *H. peltatum* and certainly differ from European material; no doubt other southern hemisphere material is also distinct.

The bibliography at the end of the book is interesting but not very complete. Two fairly recent works which come to mind are not included, viz. Badré F. *et al.* (1982), Le genre *Cheilanthes* en France, *Webbia* **36**(1): 1–38; and Poirion, L. *et al.* (1967), Pteridophytes de la Côte d'Azure, etc., *Webbia* **22**(1): 21–37. This latter work lists *Osmunda regalis* var. *plumieri* as occurring in southern France. I would have liked to see this variety defined in the present work. Does it differ from the *Osmunda regalis* we have in Britain?

Overall, these minor criticisms will not detract greatly from the value of the book. It is a very welcome new field guide to the ferns and fern allies of France which is likely to be of great value to many British pteridological tourists in France, and elsewhere in western Europe.

M. H. Rickard

Communicating in science: writing and speaking. Vernon Booth. Pp. 68. Cambridge University Press, Cambridge. 1985. Price £3.95 (0–521–27771–X).

If I, as an editor, had dictatorial powers over the authors whose work I edit, I should insist on their reading and inwardly digesting this small paperback. So much good sense regarding the writing of scientific papers (not to mention the advice to speakers) is to be found in these few pages, that all writers on scientific subjects would benefit from reading them and carrying out the instructions and advice that they contain.

Dr Booth's book originated in 1970 as an essay entitled *Writing a scientific paper* and has been gradually enlarged through several editions. It is dedicated to Th. M'Fline, an acronym for *The Man* whose *First Language Is Not English*, and its watchword is clarity – how to say exactly what you mean to say without indulging in (to quote a well-known radio programme) hesitation, repetition or deviation. The first and longest chapter, 'Writing a scientific paper', deals with the basics of grammar, punctuation and style that are so often ignored nowadays, sometimes resulting in such gems as "After standing in boiling water for two hours, examine the flask" or ambiguities such as "Lions eat more than antelopes". Then follows good advice on 'Preparation of the typescript and figures' and 'Speaking at a public meeting'. How I wish that everyone who stands up to give a scientific paper (or even merely a slide talk) would read and digest the latter chapter first! In the next two chapters, 'Addressed to those for whom English is a foreign language' and 'An appeal to North Americans', the author comes to grips with difficulties of English idiom and usage, and points out that caring Americans are themselves concerned about the trend towards inelegant writing and pomposity in works emanating from that continent. Complex adjectival phrases (stacked modifiers) such as "Barley root tip cell chromosome aberrations", for instance, tend to stop the reader in his tracks. The work ends with advice on 'Preparation of a doctoral dissertation or thesis' and an annotated bibliography.

I found this a very sound book that was amusing and refreshing to read and well worth the cost.

N. K. B. Robson

Documents floristiques. Tome III. Edited by F. Vignon *et al*. Pp. 203. Institut Floristique Franco-Belge, Station d'Etudes en Baie de Somme, F 80230, Saint-Valery-sur-Somme, France. 1982. Price FF 60 (ISSN 0182–0788). Obtainable from F. Vignon, Secretaire Laboratoire de Biologie Végétale, U.E.R. des Sciences exactes et naturelles, 80039 Amiens Cédex, France.

This part of the "Documents Floristiques" contains, besides some botanical records of more local interest, a series of detailed grid maps of the present distribution of 151 plants in Northern France (from the Cherbourg peninsula eastward) and in Belgium and Luxembourg.

These "précartes" (preliminary maps) are part of a series covering, or planned to cover, the greater number of the rarer of more localized vascular plants of the regions concerned. They incorporate, as far as was possible, all previous records, as well as the results of the survey currently in progress. They include therefore the data already published in the *Atlas de la flora belge et luxembourgeoise* (E. Van Rompaey & L. Delvosalle, 1979), and for the extreme south part of the Netherlands covered by the maps used, data from the *Atlas of the Netherlands Flora* (J. Mennema, A. J. Quene-Boterendbrod & C. L. Plate, 1980).

In the absence of any equivalent of our British National Grid, a grid (of 4 × 4 km squares) has been employed, based upon the Belgian "carte d'état-major" at the 1:40,000 scale, by dividing up each sheet of that map into 40 equal squares; this grid has been extended into the area of France concerned. It has the great disadvantage that it is not printed on the local maps of the territories concerned; we are very lucky to be able to use our clear National grid for mapping purposes so painlessly!

The maps under review cover, in alphabetical order of generic and then species names, the less common species present in the region from *Galeopsis speciosa* to *Lythrum salicaria*. Perhaps the most striking *general* point that emerges from their perusal is that, contrary to what is often supposed in Britain, there has been an even greater decline in N. France and in Belgium than in lowland Britain of many species. This is particularly true of heath and bog plants, for example *Gentiana pneumonanthe*, *Hypericum elodes*, and *Lycopodiella inundata*, all of which are now much rarer than about 50 years ago in N. France and in Belgium, and almost confined to limited areas in the Cotetin in W. Normandy, the Pays de Bray in E. Normandy, the Belgian-Dutch Campine region, and a few scattered sites elsewhere. *Hammarbya paludosa*, indeed, now seems to have disappeared from the whole region covered by the map used (though still persisting in Brittany and the Netherlands); by contrast it is still frequent in our New Forest.

On the other hand, *Halimione pedunculata*, now extinct with us, is still holding its own on the coast between Abbeville and Calais, while *Himantoglossum hircinum* is far commoner in N. France (some 200 localities shown) than in S. England, both on the chalk and on coastal dunes.

Liparis loeselii, though extremely local in N. France, and now almost confined to the dune slacks and fens of the coast from Abbeville to Calais, has there what may well now be the largest and most viable populations of the typical species (as opposed to our western var. *ovata*) left in all Europe except possibly in extreme southern Germany.

Most of the species covered in this work, however, display the distribution patterns one would expect on habitat and climatic grounds; thus *Luzula forsteri*, an Atlantic-Mediterranean species, has a fairly sharp N.E. limit from the mouth of the Somme across to Laon and the upper Seine Valley.

The interesting outliers of the central European calicole flora are well exemplified by the maps of *Geranium sanguineum* and *Helianthemum apenninum*; these species and others are almost confined in the region concerned to the cliffs and chalk grasslands of the lower Seine valley, though the latter also occurs on the limestone cliffs of the Meuse Valley on the Franco-Belgium border. As in Britain, these species appear to be relics of a wider distribution from a time when open, calcareous habitats were probably more widespread, before the forests closed in.

The map of *Gentianella germanica* clearly shows how this species entirely replaces *G. amarella* as the common species of French and Belgian calcareous grasslands. *G. amarella* in N. France is a very rare and declining species of coastal dune slacks; indeed some reputed sites for it produce now only *G. uliginosa*.

Many non-British species are of course included among those mapped, and these cannot be discussed in detail here, except that it is worth remarking that very few of these actually reach the Channel coast, though often common inland, either on the chalk or in such areas as the acid Ardennes forest.

There seems to be few errors, though the outlying Luxembourg localities for *Hymenophyllum tunbrigense*, mentioned in the rubric, are not actually shown on its map, and the occurrence of *Globularia punctata* on the downs of the Somme valley above Amiens is omitted.

The point is made however that these are provisional maps, to which, it is hoped, further field work will add records.

This is indeed an interesting work, which all British botanists interested in the wider distribution of British plants should obtain; the whole series will be most valuable when complete. It is good to see that our French colleagues are now getting to grips with detailed mapping of the flora of at least the north of their country.

F. Rose

Plant facts and fancies. Sylvia Woods. Pp. 93, with numerous line drawings. Faber & Faber Ltd., London. 1985. Price £5.50 (ISBN 0–571–13436–X).

This short book is essentially Victorian in its approach, both to its subject and its readers. It is suggested that the work should be catalogued under 'Plant – Juvenile literature', and in her effort to write for young readers the author stoops to oversimplification and a persistent moralizing tone.

On the whole the material presented is accurate, although as in many books on plant-lore there is a tendency to place in the past superstitions and customs that are still very much alive. Thus, although it is implied that belief in 'lone thorns' died out with the advent of mechanical hedge-trimmers, it is still possible to meet people who not only hold the belief that to damage such thorns invites misfortune, but also claim to have seen the fairies associated with the trees. At times it is difficult to know if inaccuracies are caused by a desire to oversimplify or by inadequate knowledge of the subject. Certainly the opening paragraphs of the chapter 'Naming the flowers' seem to suggest the latter: "The official botanical names of plants were finally decided in the eighteenth century by a Swedish botanist called Carl von Linné."

All in all we have a conscientious offering which, though neither inspired nor inspiring, provides half-an-hour's entertainment.

A. R. Vickery

Holding your ground. An action guide to local conservation. A. King & S. Clifford. Pp. ix + 326, with 39 black & white photographs and figures. Maurice Temple Smith, London. 1985. Price £5.95 (ISBN 0–85117–250–4).

Here is a book for the desk-top of any conservation worker or group concerned with protecting local wildlife, landscape and old buildings. Angela King and Sue Clifford have produced an 'action guide' for Common Ground (an agency concerned with promoting and exploring our common cultural heritage), which contains both character and a thoughtful compilation of valuable information.

After emphasizing the importance of local environment to the fabric of our common culture and explaining the major ways conservation can be put into practice locally, the main text is given over to doing just that. Each chapter deals with a local habitat, for example trees and woodland, summarizing its value. This value is given a broad interpretation: ancient woodlands not only contain a wide diversity of plants and animals but also have landscape and amenity value and historical and cultural interest. This refreshing perspective runs throughout the book and will encourage anyone who picks it up to read on to the next stage: advice and examples of how to turn interest into action.

The chapter on trees and woodland deals with Tree Preservation Orders; felling licences; the survey, purchase and management of conservation areas; tree nurseries and planting; and town trees and grants. At the end of the chapter the statutory agencies are described, and references and further reading are prescribed. This pattern is repeated for other habitats and also for landscapes, monuments and buildings. (There is also a short chapter on the conservation of plants and

animals). The character of the book lies in the way the authors have blended together essential information on, say, how to purchase a woodland with an illustration of how this can be achieved, in this case the purchase of Hardings Wood. These examples are written by the local groups responsible for the 'action' and contain not only the essential details but also the local flavour of a project. Ideas and possibilities take shape that to the reader are often little more than pipe dreams. The examples come from a range of trusts, projects, societies and individuals and describe both the successes and the failures.

The final four chapters deal with the organization of local action, collecting and using information, and understanding of local government, and how to achieve financial and physical help.

So often today, in the face of modern decision-making processes, there is a feeling of helplessness – that the control of our environment is out of our hands. This book offers some sound and carefully presented information on how to at least hold your ground. But more importantly, through carefully used examples of local people achieving local success, it kindles the confidence in the reader to join in this success.

P. M. WADE

Ecological Flora of the Shropshire Region. C. A. Sinker, J. R. Packham, I. C. Trueman, P. H. Oswald, F. H. Perring, & W. V. Prestwood. Pp. xvi + 344, with cover paintings and 8 colour plates by Anne Gilbert, chapter headings by Lindsay Brown, 4 black & white photographs and endpapers, 48 text figures, 18 tables, numerous distribution maps and 12 overlay maps. Shropshire Trust for Nature Conservation, Shrewsbury. 1985. Price £23.00 (ISBN 0–9508637–0–X).

To some people, Shropshire may not spring to mind as one of the botanical aristocrats; but it is a big county, and in the hands of this distinguished panel of authors it emerges as a fascinating and varied area, a pleasant hunting ground for the field botanist, and a challenge to the ecologist.

This is not the first county Flora to profess an ecological bias, but there has been nothing on this scale previously. The book is divided into three parts. The first gives an account of the methods used in the present survey, followed by an extensive treatment of the history of botanical recording in the county. The chapter on 'Environmental background' is readable and informative, covering climate, topography, geology, soils and land use. These aspects are treated with considerable academic vigour; for example, much recent work on Shropshire soils is discussed in some detail, and its relevance to the vegetational patterns is considered. Of less value is the table of 'Environmental Profiles', in which certain features are listed for each 10 km square. This seems to have limited relevance, since there is no corresponding vegetational information on a 10 km basis. Twelve selected environmental features have in fact been plotted on a tetrad basis, and these are given as dot maps, which are also duplicated as a transparent overlay, a pocket for which would be useful. The section ends with a short chapter on 'Biogeographical elements', in which one of the authors (F.H.P.) indicates how much our knowledge of plant distribution has changed since the publication of J. R. Matthews' *Origin and distribution of the British Flora* in 1955.

Part Two is entitled 'Habitats and plant communities'. The authors recognize four divisions: open water and wetland; rock, heath and grassland; woodland, hedge and scrub; and disturbed and ruderal habitats; and if you have forgotten what ruderal means, you are advised to think of ruins, rubble, rubbish, railways, roadsides and runways! There follows a chapter in which the author (C.A.S.) summarizes our knowledge of the vegetation of the region in the past, based on pollen analysis, illustrates some fascinating ecological relationships on maps, and argues a convincing case for conservation priorities.

The third part is the traditional systematic account of the vascular plants and their distribution. The area surveyed is a large one, comprising 1100 tetrads; and it was decided to designate common, intermediate and rare species for mapping purposes. About 200 of the common plants are not mapped, neither are the rare plants that occur in fewer than three tetrads. The dot maps are placed with the relevant text, and ecological notes include habitat, associated species, water regime, soil texture, nutrient and base status, pH, microclimatic conditions, biotic factors and reproductive strategies. The book ends with a list of herbaria containing Shropshire specimens, and a gazeteer of place names.

Perhaps the most radical feature of this new Flora is the analysis of the plant records by computer methods. Two ordination techniques have been used: reciprocal averaging and indicator species analysis. In each of the four habitat types, 42 stands are analysed, and the full species/stand matrix is printed. The completed ordinations are then used as the basis for a discursive ecological treatment of each habitat.

There are eight pages of colour illustrations (each dealing with a particular habitat), some attractive sketches introducing each chapter, and a dozen or so aerial photographs with extensive captions.

The area covered by the Flora is "The Shropshire Region", interpreted as Shropshire, plus bits of neighbouring counties to make up a 'tidy' rectangle. Interestingly, the few bits of Shropshire which fall outside this rectangle are not omitted, so we end up with a rectangle plus warts! There have been many critics of this pattern, whom the authors are not afraid to quote. I have some sympathy with the sentiments of one of my fellow Welshmen who remarked " 'Greater Shropshire' indeed; I'd make it the East Riding of Powys!" In fairness however, I must compliment the authors on spelling the Welsh place-names correctly, e.g. Pumlumon.

Who was the cynic who said that the Bible was the only good book written by a committee? This Flora has six authors, but the whole work hangs together effectively. Charles Sinker's compelling prose in the Preface sets the tone for a volume that is both scholarly and readable. It sets a new standard for county Floras.

G. Wynne