

Book Reviews

John Lightfoot: his work and travels, with a biographical introduction and a catalogue of the Lightfoot Herbarium. J. K. Bowden. Pp. vi + 255, illust. The Bentham-Moxon Trust, Kew, and Hunt Institute for Botanical Documentation, Pittsburgh. 1989. Price £16 (ISBN 0-913196-51-7).

The contribution made by the English clergy to the development of descriptive British natural history, especially during the eighteenth and nineteenth centuries, was nothing short of phenomenal. The Reverend Gilbert White (1720–1793) is perhaps the most famous, the Reverend William Kirkby (1759–1850), father of British entomology, not far behind, and here, of course, is Whites's friend, the Reverend John Lightfoot, M.A., F.R.S., F.L.S. (1735–1788), who is the subject of a new biography by Jean Bowden. Lightfoot's reputation is founded upon his botany and conchology: his *Flora Scotica*, 1777 and the *Catalogue of the Portland Museum*, 1786, being the somewhat slender published evidence of his activities. It is through the statements of his many correspondents, however, that a broader picture unfolds of his wide-ranging knowledge, his unselfish help to others, and the pursuit of scholarly excellence. Lightfoot's close friend Thomas Pennant (1725–1798) summed things up: "He was an excellent scholar in many branches of literature; but after the study of his profession, he addicted himself chiefly to that of botany and conchyliologie [sic]. He excelled in both."

Not much has been written hitherto about the life of John Lightfoot. Thomas Pennant, zoologist, traveller, and correspondent of many of the eminent figures of natural philosophy in the eighteenth century, knew Lightfoot well. In the second edition of *Flora Scotica*, 1789, published just after Lightfoot's premature death, Pennant included an additional preface entitled 'Some account of the author of this work.' In 1819 James Edward Smith's short biography appeared in Rees' *Cyclopaedia*, and, apart from a short obituary notice in *The Gentleman's Magazine* in 1788, that is all.

John Lightfoot was born on 9 December 1735 at Newent in the Forest of Dean, about 13 km from Gloucester, the son of a gentleman farmer. Little is known of his upbringing until 1753, when at the age of seventeen he entered Pembroke College, Oxford. He graduated in 1756, and proceeded to an M.A. in 1766. After taking holy orders, he was appointed curate at Colnbrook, Middlesex, sometime between 1756 and 1762. In 1765 Lord Chancellor Northington gave him the living of Shelden, near Alton in Hampshire, a stone's throw from Gilbert White's parish of Selborne, which he held until 1777. He married Matilda Raynes, daughter of a wealthy mill-owner of Uxbridge, Middlesex in 1780, when he was nearly 45 and she just 20. They had three daughters and two sons, although one daughter died before the age of two.

Like so many churchmen, Lightfoot used his spare time for the observation of nature, study and research. It was almost certainly as a result of this that in 1767 he was chosen, at the age of 31, to become Chaplain to the Dowager Duchess of Portland (the second Duke having died in 1762). Lady Margaret Cavendish Bentinck, only daughter and heiress of the second Earl of Oxford, was the leading patroness of the natural sciences in England during her lifetime. Sir Joseph Banks (1743–1820) and Daniel Solander (1733–1782), fresh from their triumphant circumnavigation in 1768–1771 with Cook, were frequent visitors to the Dowager Duchess's great house at Bulstrode in Buckinghamshire. The focus of attention there was her natural history collection on which she lavished most of her fortune and energy. On the Dowager Duchess's death in 1785, Lightfoot was mainly responsible for drawing up the sale catalogue, the well-known *Catalogue of the Portland Museum*, 1786.

Lightfoot's travels to Scotland (1772) and Wales (1773) were undertaken at the instigation of Thomas Pennant and Sir Joseph Banks respectively. Pennant had early recognised the excellence of Lightfoot's botany and invited him to be his companion on a five-month tour in Scotland, including the Hebrides, for the purpose of observing and working up the botany of a region little studied in that respect. Pennant strongly encouraged Lightfoot to prepare the work for publication and actually provided financial support for *Flora scotica* which came out in 1777. It was the first Flora of the north of Britain in which Linnaean binomials were used. However, during Lightfoot's lifetime

Flora scotica was heavily criticised by those perhaps envious of Pennant's financial support and it was not the success it deserved to be. Lightfoot's tour in Wales with Banks did not result in a publication.

Jean Bowden's new biography, written whilst she was employed at Kew, is based on Lightfoot's letters to his friends and associates, especially the Dowager Duchess of Portland, Sir Joseph Banks, Sir John Cullum, Thomas Pennant, William Curtis and Gilbert White. She has scoured libraries and record offices for material, photocopies of which have been deposited in the Kew Archives. By using extensive and numerous quotes from this correspondence, Ms Bowden has tackled the organisation of the biography in an unconventional way. A long introduction outlining Lightfoot's life precedes sections devoted to the principal events – the tours in Scotland, Wales, Devon and Cornwall, Portland Catalogue and British Flora – using quotations to chart a step-by-step account of itineraries and activities. A final section consists of a Catalogue of the Lightfoot Herbarium at Kew, and five Appendices.

The Catalogue of the Lightfoot Herbarium comprises, at 90 pages, over a third of the volume. With the exception of modern identifications, verified by expert helpers, summary counts of Lightfoot's folders and sheets and any attributions or comments, all the information in the entries is taken directly from the writing on the folders or sheets. The Catalogue is extraordinarily detailed. Its ease of use would have been enhanced by inclusion in the index of names used in it. This point of criticism applies also to names which appear in the Appendices. The index is rather basic and reduces usefulness of the biography for quick-reference purposes.

Scholarship in biographical study can result in exceptional factual accuracy but also a loss of the readability. Here the over-use of quotations from newly-revealed sources becomes almost an irritation. The reader longs for some analysis and speculation to chew upon. At least footnotes have been omitted though, and all references are gathered together into three pages at the end. Typography and lay-out are workmanlike, but the nine illustrations have printed poorly in the text. The map of Scotland showing Lightfoot's itinerary requires the use of a magnifying glass.

The overwhelming impression of this biography is that much new light is shed on John Lightfoot's natural history activities through recently uncovered manuscript sources. For botanists, the Catalogue of his herbarium, linked with a detailed investigation of collecting localities, will provide much essential information about the British flora. For the student of biography, Ms Bowden's study fills another gap in the who's who of eighteenth century British natural history.

R. E. R. BANKS

The botanist in Berwickshire. M. E. Braithwaite & D. G. Long. Pp. 111, with map. The Berwickshire Naturalists Club. 1990. Price £6 (ISBN 0-9516434-0-1)

This attractively produced work is an excellent example of the type of local botanical guide now becoming popular, providing the reader with something more than a basic check list though falling short of a comprehensive flora. The soft cover is attractively designed, incorporating a very professional colour illustration of Rock Rose, and the size – a slim 20 × 15 cm – makes for easy portability. The inclusion of a bryological section is somewhat unconventional and there may be differing views as to the desirability of this format, but in an economically priced work there is much to commend the combination.

An introductory section sets out the format and scope of the contents and includes an historical account of botanical recording in the county. The order of species and their scientific names follows the 3rd edition of Clapham, Tutin & Warburg's *Excursion Flora* and the common names are according to *English Names of Wild Flowers*, 2nd edition. Local and possibly unfamiliar names are rarely used. The section on flowering plants and ferns by Michael Braithwaite (B.S.B.I. Recorder for v.c 81) is preceded by an overview of the flora based on the principal habitat types found in the county, indicating their botanical features and the changes which have taken place over the years. A statistical summary of the native and introduced flora indicates its composition in terms of species, subspecies, microspecies and hybrids.

The recorded taxa, past and present, total 1151, of which 946 are known to occur at the present day. The check list which follows provides basic information for each species, ranging from a simple

indication of relative abundance in the case of the more common plants, to more explicit notes including recording dates and sites for the more interesting or localised species. Conventional symbols indicate non-native species and those considered no longer present. Rather unconventionally an indication is also given of species for which there is no record, but which might be expected in view of their national distribution. A useful gazetteer assists the user to identify many of the localities mentioned in the text, and there is a short bibliography. Readers may find the lack of a comprehensive index inconvenient. Only the genera are included, presumably in the interests of space-saving. For the convenience of those more familiar with common names there is a table indexing the families of flowering plants and ferns, but the value of this is somewhat reduced by its not being listed alphabetically.

Of the bryological section, which is by David Long of the Royal Botanic Garden, Edinburgh, and will no doubt be suitably reviewed elsewhere, it is only necessary to say that this is very comprehensive and follows the same format of overview followed by a check list.

The authors of *The botanist in Berwickshire* are to be commended for the production of this useful volume which should prove a popular guide to the flora of the area.

A. MCG. STIRLING

Sussex plant atlas: selected supplement. M. Briggs. Pp. 32, with introductory notes and 37 distribution maps. Booth Museum of Natural History, Brighton. 1990. Price £3.50 (ISBN 0-948723-14-9).

This book is intended to be used in conjunction with the *Sussex plant atlas* published by P.C. Hall in 1980 (see review by Rose in *Watsonia* 13: 353-354, 1981). It has the same format and the same attractive cover. It is to be hoped that the colour reproduction of the latter is not so poor on all copies as it is on mine.

The book consists of a selection of records made by members of the Sussex Botanical Recording Society from 1979 to 1988. Only those records for which the more recent information adds significantly to the *Plant Atlas* have been included. The brief text is interesting and informative. It includes corrections of errors published in the *Atlas*, effects of the 1987 storm and sites of deliberate introduction of native species. There are some enviable new county records and rediscoveries. Those plants which Francis Rose considered under-recorded in his review of the *Atlas* have clearly been chased up and a more comprehensive distribution pattern results. I would have thought that some of these species are still under-recorded, but perhaps Sussex is fortunate and its ponds and waterways are not disappearing under that unwelcome trio: *Crassula helmsii*, *Lemna minuscula* and *Elodea nuttallii*. Clearly no-one except the author was interested in looking for further specimens of *Prunus* \times *fruticans*.

A list of aliens and adventives additional to those in the *Atlas* is given. It is surprising that this does not include the well established colony of *Tropaeolum speciosum* at Wivelsfield Green. With the assistance of Jenny Moore of the Natural History Museum, an account has been given of the Sussex Charophytes, with tetrad maps for four of the species.

Owners of the *Sussex plant atlas* will need a copy of this *Supplement* to bring their botanical knowledge of the county up to date.

J. E. SMITH

The Davis & Hedge Festschrift. Edited by Kit Tan, assisted by R. R. Mill & T. S. Elias. Edinburgh University Press. 1989. Pp. xxvi + 351; 1 colour plate and many b/w illustrations. Price £47.50 (ISBN 0-85224-638-2).

The subtitle of this book, "Plant Taxonomy, Phytogeography and Related Subjects", describes not only the scope of the 25 commissioned articles but also the life-long research goals of the two distinguished Edinburgh botanists in whose honour it was published. It starts with a biographical

sketch of Peter H. Davis ('P. D.' to his friends and colleagues), a list of his publications, an illustrated description of *Biarum davisii* and an even briefer account of the career of Ian C. Hedge with an extensive bibliography. Both men have a lifetime's involvement with taxonomic botany at Edinburgh, one as a University lecturer and professor as well as editor of the *Flora of Turkey*, the other as a taxonomist and curator of the herbarium at the Royal Botanic Gardens and contributor to most of the post-war Floras of south-west Asia.

It is appropriate that south-west Asian botany should be the theme of most of the authors selected by Kit Tan, all of whom have had a close professional relationship with Davis and Hedge. One contribution, Jennifer Lamond's 'Plantsmen and Pottery', reflects the private interests of Peter Davis as a collector of ceramics, while Karl-Heinz Rechinger's account of 'Fifty years of botanical research in the *Flora Iranica* area (1937–1987)' is a *tour de force* which should be read by anyone contemplating botanical field-work in the region. Rupert Barneby's account of 'A far-rolling stone' deals with the bizarre story of a 'dimpled egg' excavated in a paddock in Leicestershire which proved to be the seed of a Brazilian rain-forest liana; it reminds us that the flora of the British Isles is full of surprises.

There is little of purely local interest in this book; it is hard to see who might buy a personal copy, since its price of nearly £50 represents a major outlay for what is a rather eclectic range of topics. Academic libraries, on the other hand, will find its articles to be much sought after and will need to buy it. It is a worthy memento to mark the 70th and 60th birthdays of two of Edinburgh's outstanding botanists, who are widely respected for their taxonomic expertise and judgement; it also displays the high standards of editorship for which they are known.

J. R. EDMONDSON

Plants for people. A. Lewington. Pp. vii + 232; lavishly illustrated. Natural History Museum Publications, London. 1990. Price £19.95 (ISBN 0-565-01094-8).

Plants for people is exactly as its title suggests. Each one of the seven chapters lucidly describes the botanical basis of our daily lives: plants that cover us; plants that feed us; plants that protect us; plants that cure us; plants that transport us and plants that entertain us. A purist would categorize the book as Economic or Ethno-Botany, but these descriptions would fail to do justice to the highly readable, informative and entertaining nature of its contents.

Plants for people does not become bogged down in any one aspect of plants or their uses, but skilfully takes the reader through the scientific aspects of plants and their extracts, to why they are used as they are and at what cost both in financial and environmental terms.

The book is as up to date as it could be, telling us that a chemical (castanospermine) from the seed of an Australian evergreen tree called the Moreton Bay Chestnut (*Castanospermum australe*) has recently been isolated and found to have a dramatic effect on the AIDS virus HIV. The historical development of plant use is also well presented. The Egyptians used plant oils and fragrant flowers in their ablutions. The Romans were aware of the disinfectant properties of Lavender. Indeed, its scientific name, *Lavandula*, is derived from the Latin 'lavare' meaning to wash. "Ring a ring of roses, a pocket full of posies" testifies to the once held belief that carrying a posy of fragrant flowers would ward off disease.

The development and context of plant use is by no means confined to the western or Classical world. Some of the uses made of plants and their by-products by indigenous peoples worldwide have also been the subject of research. Colouring the skin, particularly the face, with patterns of pigments conveys important messages about the wearer be they from Burma, New Guinea, Japan, Cameroon or the Indian sub-continent.

The main text guides the reader through the information at an easy but attention-holding pace. Every second page presents a profile of a particular plant which gives a little more in-depth information about it, the areas in which it is found and the uses to which it has been put by people.

As a book it is well constructed and any reader will appreciate the unpretentious language, the excellent and numerous colour plates and illustrations and the excellent but over-done design. It is also gratifying to find a comprehensive index.

In her Foreword to *Plants for people*, Anita Roddick expresses the hope that when people read

this book they will gain a renewed appreciation of what plants do for people the world over. In that it succeeds. It is not just another contribution to environmental friendship. It is a book whose literary yet scientific approach gradually reveals the fundamental part played by plants in our various lifestyles and makes the reader consider and realise the implications of this relationship. It neither hesitates in nor apologises for telling the facts as they are. It gives everyone, be they scholar or amateur, an opportunity to reflect upon the impact they themselves make on the environment by doing something as simple as brushing their teeth.

The Royal Botanic Gardens, Kew, the Natural History Museum and, above all, Anna Lewington have provided their public with a worthwhile and informative read.

E. I. KWASNIK

A guide to some difficult plants. Edited by E. Norman. Pp. 131 with numerous line drawings and keys. Wild Flower Society, Loughborough. 1990. Price £6. Available from 68 Outwoods Road, Loughborough, Leics.

This booklet usefully gathers together several series of articles from the *Wild Flower Society Magazine* from 1973–88, published by the generosity of the mother of Christine Hibbert, a member who died too young. The authors are all experts in their fields and although the chatty nature of the articles occasionally gives a feeling of talking down, they are packed with useful facts to aid all field botanists.

John Mason's guide to bird-seed aliens is full of drawings you will find elsewhere in British books, with keys and salient features for a wide range of species. It makes one wish that rubbish-tips were as rich as they used to be. Willows are comprehensively covered by the Howitts, with hints from a lifetime's experience augmented by the first of Olga Stewart's excellent drawings. Alpine willows are not considered. Alan Silverside takes us skilfully through yellow Compositae, even tackling *Hieracium* and *Taraxacum* (inevitably the least useful part of the book). Next, *Juncus* and *Luzula* by Dr Tom Cope are dealt with in some depth including *J. subulatus*, *J. planifolius*, the *J. bufonius* splits and some hybrids. But I feel you would look in vain for *J. capitatus* on Anglesey these days. The seed characters of *L. campestris* and *L. multiflora* are not mentioned. Norman Robson gives a fascinating discourse on *Hypericum*. I had not realised that *androsaemum* signified 'man's blood' after the red sap of Tutsan. The genus is placed in its world context which helps to explain several puzzles.

Major-General Turpin deals with heathers, calling on a wide range of sources listed at the end. Considerable detail about all species and hybrids is given and we are told how to spot and conclusively identify *Erica* × *watsonii* (*tetralix* × *ciliaris*) which the inevitable visitors to Dorset would value. Comments about the 47 variants of *Calluna* described make one want to know more! Finally, Tim Rich gives a foretaste of his Crucifer Handbook in a chapter on "nasty" yellow crucifers. Few people would not find useful his forthright comments on which books not to use and the practical hints on how and when to determine his favourite plants. 'All You Want to Know About Yellow Crucifers' might be an alternative title.

So, if you are active in the field or want your appetite stimulating, here is a very good and cheap booklet to help you. Buy it before it is out of print.

G. M. KAY

Atlas of the British flora. Edited by F. H. Perring & S. M. Walters. Pp. xxiv + 444. Botanical Society of the British Isles, London. 1990. Price £20 (ISBN 0-90115-819-4).

The *Atlas* has had a long history; it was first published by Thomas Nelson and Sons in 1962 and reprinted only a year later, such was the importance and demand. The work was originally reviewed by D. H. Kent in *Watsonia* 5: 396–397 (1963). A second edition was produced by Epworth Press in 1976 with two more reprints before a third edition in 1982. The changes between the editions are rather less dramatic than might be supposed, for the second edition only updates the rare species.

The completion of the *Red Data Book of British Vascular Plants* after seven years of work on some 350 of our rarest species allowed these maps, where necessary, to be updated and elsewhere, only obvious errors corrected. Any maps which were altered were given a + sign to the right of the species number in the inset. Similarly, maps altered in the third edition were given an * symbol. Sadly, even the Pteridophytes were not updated by using the more recent maps in the *Atlas of ferns of the British Isles* (1978) edited by Jermy, Arnold, Farrell & Perring, and the under-recording of *Primula vulgaris* in Ireland due to an administrative error, subsequently rectified in the *Critical supplement*, has again been overlooked.

This new reprint of the third edition of the *Atlas* is in a much smaller (and hence more convenient and portable) size, c. 35.0 × 17.5 cm. The work can at last be taken off the table and into the car – even carried in the ruck-sack. The maps are clear and usable. The original transparent overlays (six, each with two maps) of the first and third editions have been reproduced as three ordinary pages. Sadly, in an attempt to keep the cost of the reprint reasonable the reader is left to produce his or her own transparent overlays. However, there is one very important addition: an Index and Bibliography. This has been prepared by C. D. Preston in his usual meticulous and careful way. This welcome addition enables the user to check if a more recent (1962–1989) and up-to-date map has been published elsewhere. We are especially grateful to him for his efforts; for these nine pages alone the work is worth buying.

S. L. JURY

Guide des fougères et plantes alliées. R. Prelli. Pp. viii + 232, illustrated. Editions Lechevalier, Paris. 1990. Price not stated (ISBN 2-720-50528-5).

This second edition of Prelli's *Guide* follows the same pattern as the first, a brief general account of the essential features of the Pteridophyta, followed by a *catalogue raisonnée* of the species to be found in France (including Corsica).

The anatomy and morphology of the pteridophytes are dealt with at an elementary level, and there is little at which to cavil. Not all fern spores however possess a perispore (as is implied). Beginners will search the spores of *Pteridium* (for example) in vain. Mention might have been made of the manner in which the gametophytes of many ferns pass through male and female phases as they develop. This feature, tending to discourage intragametophytic selfing, may be an important aspect of their population biology.

The condensed account of the fossil history of the pteridophytes is not wholly in accord with modern views, although similar will be found in some current textbooks. There is little evidence of any close relationship between *Psilotum* and *Rhynia*. Many would now doubt the relevance of the kind of heterospory seen in *Selaginella* to the evolution of seeds. The reader might assume from the text that all the fern-like fronds found in the Carboniferous were referable to ferns. Many belonged to the all-important pteridosperms (which receive no mention).

The systematic section, which is brought into line with current knowledge, forms a useful Flora. Keys are provided for the larger genera. *Asplenium* is made to include *Phyllitis* and *Ceterach*. The analysis of the probable relationships of *Dryopteris affinis*, *D. oreades* and *D. caucasica* (reflecting the views of Fraser-Jenkins and others) is clearly set out. The descriptions of species are frequently supported by excellent drawings, and those of many ferns by photo-silhouettes of the fronds. Unfortunately no magnifications are given. In fact, dimensions are entirely absent. "Spores smaller than in the two other sub-species" (following *Dryopteris affinis* subsp. *affinis*) is of little use for purposes of identification if no measurements are given for any form. Chromosome numbers are also conspicuously missing, although ploidy is often referred to.

According to the Introduction the *Guide* is intended for all those seeking information about the biology, ecology, evolution and classification of the Pteridophyta. Having mastered the first part of the book, it is presumably hoped that the readers will then proceed into the field to see the living representatives that France has to offer. It is a laudable aim; let us hope it succeeds.

P. R. BELL

Wild flower habitats of Hertfordshire; past, present and future. B. Sawford. Pp. xvi + 299 with 16 colour plates. Castlemead Publications, Ware, Herts. Price £18.95 (ISBN 0-948555-09-2).

This book by the Senior Keeper of the North Hertfordshire Museum's Natural History Department sets an excellent pattern that one would like to see repeated for every county in Britain. He discusses first the usual preliminaries – geology, climate and so forth – and then describes in some detail the vegetation of the county's various habitats. Finally, in a long series of appendices, which occupy almost one-third of the book, he lists the characteristic flora of these habitats. In fact he has produced a most admirable *vade-mecum* for botanists, both resident and visiting, in a county which nobody could describe as the most botanically exciting in Britain but which nevertheless has its specialities. North Hertfordshire, for instance, is the headquarters of *Bunium bulbocastanum* in England.

The habitat core of the book goes into considerable detail, describing for instance, eight woodland types in the Peterken classification plus, "recent woods and plantations", which most botanists pass swiftly by. And even Mr Sawford cannot offer a great deal more than Sycamore, Ivy, Bracken and *Urtica dioica*. However, assiduous botanists prepared to watch one plantation for several decades may also hope to log the arrival of Bluebell and Dog's Mercury. There are also analyses of eight types of grassland and ten types of wetland, with seven more sections on various man-made habitats, from arable fields to walls and churchyards. The whole enterprise, coupled with compiling the lists of characteristic plants of the various habitats, clearly entailed an enormous amount of, no doubt extremely pleasurable, field work.

The book is excellent and accurate, but could have been made even more useful by a fuller index. For instance, seeking for information on the typical habitat of *Bromus benekenii*, which I have actually seen in a Hertfordshire beechwood, I drew a blank, and quailed at checking through all the lists, or even all the likely lists. Likewise I should have welcomed more details of actual sites in the habitat section, though of course there are often good reasons for not mentioning particular sites.

A somewhat depressing Appendix is that of the 107 plants now extinct in Hertfordshire, some of them, including *Spiranthes spiralis* and *Cirsium dissectum*, having been lost as recently as the early 1980s. One advantage of publishing such lists is that it stimulates people to go and see whether the plants really are extinct – as I shall do with a local population of *Senecio fluviatilis*, which I saw in 1958, and is here stated to have become extinct c. 1960.

In future, when botanising in other counties, I shall regret not having the equivalent of Mr Sawford's book. So, more please.

R. S. R. FITTER

Wild flowers of north east Essex. T. Tarpey & J. Heath. Pp. 302, with 7 line illustrations and 659 maps. Colchester Natural History Society. 1990. Price £8 (ISBN 0-9516312-0-9).

As one who took part in the final stages of recording for Stanley Jermyn's *Flora of Essex*, published in 1974, I welcome this opportunity to find out what has been happening in my native county since then. Jermyn's flora was the culmination of many years of work and even by the time it was published it was already becoming outdated in this rapidly changing county. Unsurprisingly, this new work is often depressing reading; the phrase, "not found during our survey" appears all too frequently. Only north-eastern Essex is covered, but it is covered well.

Basically it is a report of a ten-year survey by the Colchester Natural History Society, recording on a 1 km square basis. The coverage has been remarkably thorough, with reasonable species totals from all but a handful of their 1322 squares. Maps of common species look complete, or nearly so; *Urtica dioica* has been verified from 1252 squares and *Crataegus monogyna* from 1238. The data storage (over 180,000 records) and map production have been handled by desk-top computer and should serve as an inspiration to those of us struggling to devise similar systems.

The bulk of the book consists of the accounts, sometimes brief, sometimes expanded, of all of the species recorded from the area, past or present. Most currently known species are mapped, the

maps, up to six to a page, usually being opposite the text entry. Nomenclature follows Clapham, Tutin & Warburg's *Excursion Flora of the British Isles*, 3rd edition, and synonyms are given only in the index. The introductory sections include similar 1 km square maps of surface geology, including the complex drift deposits. The accounts of the habitats are detailed and thorough and contain much on how changing management regimes have affected the flora, rarely for the better. Even popular perceptions of 'green' issues have caused problems; referring to one of the few remaining heathlands, the authors write, "there is much more to do here if the conservation message is to be interpreted as managing a habitat rather than just growing trees." On a lighter note, a mention of how lion dung may have a use in conserving woodland orchids is typical of the snippets of information to be found throughout the book.

There is much else to be found here; the remarkable linear map of *Cochearia danica* as it spreads along the central reservation of the A12 and the description of how moth collectors are threatening *Peucedanum officinale* are just two examples. Critical taxa have been carefully recorded and I was pleased to see recognition that *Poa subcaerulea* is not so rare, even in this southern county. Coverage of infraspecific taxa is, at best, sketchy, but I was interested to see the map of *Plantago major* subsp. *intermedia*, while their mapping of the two leaf shapes of *Lactuca serriola* is precisely the sort of exercise I feel should be included in such projects. The account of *Taraxacum* is substantial and up to date, though I would have liked to have seen more habitat notes. My only real criticism of the text is that there is not always a clear indication of non-native status. The text seems to indicate significantly greater losses of the native flora than is suggested by the list near the end of the book.

This is a book that should certainly be owned by every Essex botanist, but it has to interest anyone else concerned with recording schemes or conservation matters. The authors and recorders are to be congratulated.

A. J. SILVERSIDE

The biogeography of the British Isles – an introduction. P. Vincent. Pp. 315. Routledge, London. 1990. (ISBN 0-415-03470-1 hardback, 0-415-03471-X paperback).

Designed as an introductory text, this is an ambitious attempt to interest undergraduates in the interdisciplinary subject of biogeography – the study and interpretation of plant and animal distributions in geographic space. At face value such a definition appears unexceptional but, in geographical as in botanical circles, a chorological approach finds both support and opposition. By placing emphasis on patterns rather than on the processes which generate them, spatial explanations fail to disentangle the separate effects of endogenous and exogenous factors and serve rather to focus attention on the similarities in the ranges of environmental conditions at the cores and limits of distributions. In practice, Vincent achieves a reasonable balance between these competing approaches but, in consequence, the treatment of concepts and methods of enquiry is often partial and superficial. For example, although paleoecological evidence has proved useful for evaluating a number of the concepts used in the book – the causes of disjunct distributions, rates of dispersal, migration and extinction – this evidence itself needs to be applied with care. Likewise the concept of community finds no place in the discussion, even though its contribution to the history of the subject in Britain has proved to be a particularly important one. It is appropriate, for example, to examine the contribution of community ecology and vegetation description and mapping when addressing the history of nature conservation in Britain. These concepts too have played an important role in examining the impact of urban and industrial growth. Both are topics which are addressed in the latter part of the book. A partial approach means therefore, that undergraduate readers, whether in botany, ecology, environmental science or geography, are likely to need further guidance and assistance before they can adequately address the range of topics introduced here.

The strength of the book lies in its inclusion of both animal and plant distributions, of marine and terrestrial organisms and environments and in the attention given to the problem of explaining why the distribution of certain plants and animals does not extend to Ireland – the latter a particularly

useful vehicle for exploring many of the central concerns of the book. The book is very fully illustrated, has an extensive glossary and a full index. Had more attention and detail been directed to the development of a rigorous and consistent method of enquiry, then these attractive features would have ensured a wider audience than a reading of the text itself suggests.

C. M. HARRISON