

## Book Reviews

*Flora of Middlesex: A Supplement to The Historical Flora of Middlesex*. D. H. Kent. Pp. xxxii +219. Ray Society (Volume no. 165), London, 2001. Hbk. £25. ISBN 0903874-288.

Douglas Kent had not completed this book at the time of his death, but it was adopted and taken to publication by Clive Stace and Rodney Burton, with other helpers, which I am sure Duggie would have appreciated. It is not easy to take on another man's work and the late change no doubt accounts for many criticisms of the flora. The book is exactly as titled, a supplement to the Historical Flora of Middlesex (HFM), and some familiarity with the layout of that work is useful in navigating the supplement.

The book opens with a three page biography of Douglas Kent, a pleasant personal touch which is continued later with a comprehensive list of recorders, to which abundant references are made in the text. In the HFM he had divided Middlesex into seven areas which he defined using text descriptions, and these are reiterated in the supplement. The descriptions are not easy to follow unless you have an intimate personal knowledge of the whole of Middlesex or have spent a couple of hours with a pencil, an OS map and an A to Z, and in an age of graphical user interfaces a map would have been much appreciated. A list of literary and herbarium sources is followed by the species records. Kent has chosen to replace the species order based on phylogenetic relationships with an artificial but practical list in alphabetical order of genera. Which of the two is better is a matter of personal preference, but it renders the index on page 205 redundant unless you are not sure whether the species you want to look up is a charophyte, a bryophyte or a vascular plant.

The records for each species follow the pattern used in the HFM. There is no explanation in the introduction of the way in which each record is laid out, or of the criteria for inclusion of detailed records for a species. By reference to the HFM it may be inferred that the less common species are updated with records made since 1975, the common ones with records for area 7 only and the very common ones not at all, but it would have been helpful to have had this explained in the introduction. The records for bryophytes are very detailed, making good the admittedly incomplete entries in the HFM. All the species of vascular plant listed there are represented in the supplement, as well as seventy eight new aliens, four new taxonomic creations and two extinct natives discovered in herbaria. Middlesex is a county where human activity has an overwhelming influence on the flora and casuals, aliens and garden escapes have been integrated into the supplement at the same level as everything else. Nothing could better illustrate the recent change in attitudes from a vision of a flora consisting of "good" natives adulterated with "bad" aliens to one showing a living and dynamic reflection of the environment and the factors that influence it.

In a work of this type errors are inevitable and start with the tulips on the dust jacket, attributed to Shortwood Common instead of Harefield. The review copy did not have an *errata* slip, but I believe one is now provided. Erroneous records are not so easy to spot unless you were the recorder! To mention a couple, that for *Cyperus congestus* has been either incorrectly attributed to G. Ho. or G. Ho.'s record for *C. eragrostis* in 1994 has been incorrectly entered. G. Ho. also appears as G. H. in some records. However, enough of this griping. The book is an essential purchase for anyone interested in the botany of Middlesex and is a fitting finale to the work of Douglas Kent.

G. HOUNSOME

*Moccas: an English Deer Park*. Edited by P. T Harding and T. Wall Pp. 348. English Nature, 2000. £20. ISBN 1-85716-511-X.

In 1981 Moccas Park became the first parkland National Reserve having been in English Nature's 'sights' for almost 20 years. The Park had been famous amongst coleopterists since the mid 1930s when a beetle (The Moccas beetle *Hypebaeus flavipes* (F.)), new to Britain was found there. This was followed by records of more rare saproxylic invertebrates; Moccas remains the only recorded British locality of *Hypebaeus flavipes*. Locally however, the beauty and interest of Moccas and its ancient trees had been well known to naturalists and writers since the mid 19th century. The Reverend Kilvert's Diaries includes a description of Moccas in the 1870s that Richard Mabey claims is the "most graphic account we have of the feel of an ancient wood-pasture" and the

activities of the local Naturalists Field Club at Moccas are well recorded from 1816 onwards. Moccas remains a seminal site for the conservation of deadwood invertebrates and a focus for the developing interest in parkland conservation that has gathered pace over the last 10 years.

An important, and rather unusual, feature of Moccas, is the degree to which the Park's owners have welcomed the attentions of naturalists over the last 150 years. This has produced an impressive array of data sets that are fully described in the text and listed in the Appendices. The book is beautifully produced with the large amount of information presented in attractive and digestible format. Informative photographs, plans and historic documents are well distributed throughout the text. The use of historic photographs is particularly interesting.

An intriguing aspect of the interest at Moccas is the relatively poor epiphytic lichen flora when compared to the site's outstanding richness in invertebrate fauna associated with veteran trees. Received wisdom is that continuity of habitat, and particularly old trees, is crucial for both. Pollution may be the problem but possibly the actuality of habitat continuity was more complex. At Moccas the first documentary reference to the Park deer is quite late at 1617, although this does not preclude an earlier history as wooded waste on or near the site. With regard to the continuity of fallen deadwood habitats, the vast resource of 'fallow wood' described by Kilvert was surely the product of the willingness of the owners in the late 18th and 19th century to forsake the firewood resource in the interests of the picturesque; medieval occupiers are unlikely to have been as profligate. Later the advent of large chainsaws in the 1970s would have created another threat to continuity. Clearly certain critical thresholds of habitat availability were maintained at Moccas when they were not at most other parkland localities but the precise details of these thresholds are obscure at present and need more consideration if future conservation is to be successful.

In addition to including the history, current landscape and detailed descriptions of the flora and fauna of the Park (including an interesting discussion on the use of invertebrates in the conservation evaluation of parklands), the book also covers management issues and a consideration of the process of integrating the current owner's objectives with the various, and sometimes conflicting, interests of the nature conservation and historic landscape conservation professionals. These latter two aspects, however, occupy less than 10% of the whole and their treatment is much less comprehensive than for the survey data. There are a number of interesting issues of methodology here that are skated over and I was expecting a more in-depth look at the background to some of the management practices described.

Overall, however, this is an important and enjoyable book that sets a high standard in the presentation of single site ecological studies.

A. POORE

*Darwin's mentor: John Stevens Henslow 1796–1861.* S. M. Walters & E. A. Stow. Pp. xx + 338 + 8 (colour plates). Cambridge University Press, Cambridge. 2001. £40. ISBN 0-521-59146-5.

Readers of S. M. Walters' book *The shaping of Cambridge botany* (1981) will already be aware of the importance of J. S. Henslow in developing the subject in 19th century Cambridge, and of his better known role as 'Darwin's mentor'. Max Walters and Anne Stow, who during their working lives were both associated with institutions founded by Henslow, have now followed the earlier book with a full biography of this charismatic figure.

Henslow was born into comfortable circumstances; his grandfather was Chief Surveyor to the Navy throughout the 'Age of Nelson'. Henslow showed a strong aptitude for natural history as a schoolboy, entered St John's College, Cambridge, in 1814 and by 1821 had published an important geological survey of Anglesey. He was appointed Professor of Mineralogy in 1822 but when Thomas Martyn died after over 60 years' tenure of the Regius Professorship of Botany, Henslow was elected to that chair as the fourth Professor in 1825.

During the first years of his botanical professorship, 1825–37, Henslow became a focus for those at the University who were interested in science. He took a broad approach to botany, emphasising that it consisted of much more than just plant taxonomy. His lectures attracted large audiences (including medical students, who had to attend) and his practical classes and field excursions made a particular impact. He reorganised the herbarium he had inherited from Martyn and expanded the collections, to be the effective start of 'CGE'. By 1831 he had obtained an Act of Parliament to allow the purchase of land for a New Botanic Garden, although problems with a sitting tenant (or, more precisely, her grasping lawyer) delayed the official opening until 1846.

It is fortunate that Charles Darwin arrived in Cambridge during this early period. He attended Henslow's lectures for three successive years (1829–31) and quickly became a favourite pupil. When Henslow had to recommend a naturalist for the *Beagle* voyage and his brother-in-law Leonard Jenyns declined to go, Darwin was the obvious next choice. It was Henslow who advised Darwin to take the newly published first volume of Lyell's *Principles of Geology* on the voyage, but "on no account to accept the views therein advocated". Darwin took the book but ignored the advice – Lyell's work had a profound effect on his thinking. Henslow was similarly unable to accept the conclusions Darwin himself reached about the origin of species, though nothing shows Henslow's character in a more attractive light than the efforts he made to ensure a fair hearing for his former pupil.

In 1837 Henslow was appointed Rector of Hitcham, a rural parish in Suffolk. Two years later he moved to Hitcham, retaining his professorship but returning to Cambridge for less than five weeks a year to give his annual lectures. He initially persuaded himself that he would have more time for botany at Hitcham, but a friend's warning that "you will get entangled in other interests and less able to pay attention to your Professorship" proved all too true. There was great poverty in rural Suffolk and Henslow threw himself into strenuous efforts to alleviate the causes in his village by initiatives designed to give villagers a wide range of new educational and recreational opportunities. This absorption in village affairs meant that the University lost not only his botanical stimulus, but also an influential champion of the sciences at a time when curriculum reform was sorely needed. Henslow died at Hitcham in 1861.

This very attractive book provides a scholarly but very readable account of Henslow's life, and can be recommended to anyone with an interest in the history of British botany, or in the wider history of science and education in 19th-century England. I particularly enjoyed the account of the Hitcham years, a stage in his life which is not described by Walters (1981) and which is treated here with great vigour and freshness. From the first sentence ("This book is about an admirable man ..."), Walters and Stow make no secret of their sympathy with their subject. Indeed, they celebrate him as a champion of liberal and Christian views which they clearly share. This enables them to enter with interest into all his varied activities, but only by sacrificing a certain degree of detachment. Their assumption that most people will share their adverse view of Henslow's critics is most strikingly demonstrated when, after citing C. C. Babington's criticisms (in a private letter) of the effect of Henslow's period as absentee professor on botany in Cambridge, they advise the reader not to be too harsh on *Babington!* However, the biography certainly provides enough material on Henslow's life to allow readers to form their own views.

There is something of a contrast, not unusual but perhaps under-explored in this book, between Henslow's stature as a teacher and founder of institutions and his own relatively modest scientific achievements. He clearly lacked that all-consuming, almost obsessive interest in the subject that motivates so many botanists, and the intense curiosity about causes that inspires great scientists. Few authors of botanical text-books can have thought it necessary to warn readers not to make "such studies too exclusively the objects of their thoughts and care". There could scarcely be a greater contrast between the teacher who regarded "an inquiry into the origin of species about as hopeless as an inquiry into the origin of evil" and his most famous pupil.

C. D. PRESTON

*Biological collections and biodiversity.* Edited by B. S. Rushton, P. Hackney and C. R. Tyrie. Pp. x + 326. Linnean Society Occasional Publications 3. Westbury Publishing, Otley, 2001. Hbk £35. ISBN 1-84103-005-8.

This volume contains the proceedings of the Annual Regional Conference of The Linnean Society of London in Belfast in August 1996 under the title of 'Systematics and Biological Collections', with an extra session sponsored by the Royal Horticultural Society on 'Botanical illustration and its relation to Systematics'. It contains 33 papers grouped under five main headings of traditional specimen collections, living collections and conservation, molecular diversity, uses of collections and data logistics and problems. There are also additional abstracts of other papers and posters presented at the meeting.

There is breadth in coverage of both the biodiversity (bacteria to mammals) and the collections (traditional museum specimens, illustrations, living collections and seed banks) which reflects the

rather disparate nature of the papers presented at the conference. There is much of interest B.S.B.I. members, with substantial amounts on vascular plants with a strong British and Irish component. For instance, Vicky Purewal points out photographic slides tend to fade after 20–30 years, but degrade slowest if kept in a freezer at  $-20^{\circ}\text{C}$ . John Parnell estimates each herbarium specimen in **TCD** would cost about IR£8.60 to replace. Paul Hackney has looked at use of watercolours in ecological research and found they may only be useful for detecting gross changes in the countryside. C. S. Morgan notes the cultivar *Taxus baccata* 'brevifolia' in the Bedgebury Pinetum contains ten times more precursor to the anti-cancer drug Paclitaxol than any other cultivar. Martin *et al.* describe how the Threatened Irish Plant Seed Bank was established with about half of Ireland's endangered species. There are also interesting accounts of the evacuation and politics surrounding the Hamburg herbarium, the economic botany collections at Kew, botanical sculpturing and the R.H.S. fruit cultivar collection.

The book has been meticulously edited and nicely produced, and most papers, though mixed in presentation style are very readable. Inevitably, the five-year delay in publishing the proceedings has meant some articles are out of date, though some have been updated very recently. The diversity of its contents indicates the number of ways in which we need and use biodiversity, and there is much advice in this volume on how to do so. I recommend it to be borrowed to browse for the gems.

T. C. G. RICH

*Flora – an illustrated history of the garden flower.* B. Elliott. Pp 335. Scriptum Cartago, London in association with the Royal Horticultural Society, 2000. Hbk £45. ISBN 1-902686-14-4.

For hundreds of years, as Europe explored the world beyond its shores, intrepid adventurers, botanists and plant hunters sent back seeds and specimens of the thousands of flowers they came across on their travels. In Britain in particular, many nurserymen and aristocratic garden lovers set about experimenting with each new influx of botanical material, to create the garden flowers we know today. *Flora* tells the fascinating story of this evolution, drawing on the superb archive of the Royal Horticultural Society.

The exquisite illustrations within are notable not only for their historical value in charting the fascinating development of garden flowers, but also for their beauty, including works by the great names in botanical art.

The R.H.S. has built an unrivalled collection of artworks and rare books covering five centuries of plant history. Today the Society's Lindley Library is considered to be one of the world's finest horticultural archives, comprising thousands of paintings, illustrations and rare books. Dr. Brent Elliott is the Society's Librarian and Archivist.

The book covers Europe, Africa, The Americas, Asia and Australia. There is a short account of plant nomenclature, selected bibliographies and a list of the illustrations used.

This is a hefty, 'coffee table' style book. It is a beautifully produced publication celebrating the diversity of our garden flora through the illustrator's eye. As with many 'art' books the influence of the designer can be seen in the layout of the plates. Usually this is of benefit, but occasionally I found the close cropping of some illustrations annoying. The list of illustrations used gives rather minimal details on sources which are often repeated in the captions, but there is no information on the size of the original plates or on whether we are shown the whole plate or just a detail.

Whilst I found the pictures a joy to look at, the text, by comparison, is rather 'flat' and factual. It is full of useful detail, on the plants, their history and their collectors, but it is a text for dipping into rather than reading from cover to cover. This is a *reference* book and one is therefore willing to accept the repetition of some text in plate captions and the main text.

The book gives a very anglocentric view of plant collecting and gardening. The importance of early British accounts from Gerard and Parkinson is clear but there is little from other European countries, and no information on the long history of Japanese gardening. For many plants the book gives a date of introduction though it is sometimes unclear whether dates refer to introduction to Europe or Great Britain.

In general, the book illustrates nature's 'raw material' supplied to the nurseryman as species and their forms and varieties. Sometimes these include the 'freaks of nature' – double flowers, hose-in-hose, striped flowers from viral infections. There is comment on the horticulturists' urge to

'improve' upon nature through hybridisation (starting in the late 18th century to produce bigger, brighter-coloured, longer lasting flowers (sometimes at the expense of the more subtle charms of elegance, scent etc.). New breeding techniques such as genetic modification will accelerate the production of such new plants and it is likely that many more of the 'old-fashioned' plants may be lost to cultivation. The book does not mention the excellent work of the National Council for the Conservation of Plants and Gardens in attempting to find and preserve these plants.

For British purists the section on Europe will be of most interest and it is intriguing to see some British natives described from a gardener's point of view. For instance, in the 16th and 17th centuries English gardeners grew purple, blush, and double white forms for the Wood Anemone, *Anemone nemorosa*. I found it hard to believe that 'by Gerard's time alpine gentians were already extensively planted at some country houses, and were beginning to naturalise in Britain.'

The very confusing sentence 'Gerard knew two forms of the native *Primula veris*, seven forms of cowslip and oxlip (the latter a natural hybrid)...' again reflects the gardener's view of variation rather than a botanist's. I had not realised how many forms of *Papaver rhoeas* were being grown in 18th century Germany well before the Rev. Wilks' bred his 'Shirley' poppies in the late 1880s.

As well as providing an overview of where our garden plants have come from, the book gives an excellent picture of garden history. It demonstrates how much of fashion is driven by the influence of new materials. Examples of these include the brief popularity of cape heaths, which were common greenhouse subjects in the 19th century, the disappearance of the striped auriculas in favour of edged forms and the many Australian plants which enjoyed brief spells in 19th century greenhouses. There are also examples of some of the extraordinary flowers produced by the various florists' societies where carnations, anemones and others were bred to very exacting standards. There is little information on more recent trends; does garden history stop at the 2nd World War? The massive explosion in popular gardening over the last decade has continued to demand 'new' plants and there is certainly scope for another book on the sources and fashions driving modern garden plants.

The last section of the book gives potted biographies of some of the great plant hunters. I particularly like the illustration showing the great Joseph Hooker collecting *Rhododendron* species in the Himalayas. He is smartly dressed in smoking jacket and turban, comfortably seated under a tree whilst beautiful native maidens scour the surrounding lands for specimens and kneel before him to present their finds. For the armchair botanist this book will do that job for you by bringing the best and most beautiful flowers from around the world into your home.

M. N. SANFORD

*Flora Nordica. Volume 2.* Edited by B. Jonsell. Pp. xv + 430. The Bergius Foundation, The Royal Swedish Academy of Sciences, Stockholm. 2001. £55. ISBN 9171900373.

The publication of Volume 2 of *Flora Nordica*, only a little over a year after the first volume and more voluminous than it, is a notable event. Apart from feelings of admiration and an eagerness to scan the pages for new ideas and information, it brings to me an element of envy – here is a truly 'Critical Flora', very close in design to the planned 'Flora of Great Britain and Ireland' which failed because of the lack of national funding and absence of a sufficient number of trained taxonomists, both of which have contrived so conspicuously and successfully to produce this Nordic counterpart. The broad features of *Flora Nordica* were summarised by Arthur Chater in his review of Volume 1 (*Watsonia* **23**: 456-457, 2001), so will not be repeated here.

Volume 2 contains accounts of 510 species, 131 infraspecific taxa and 60 hybrids in 114 genera and 18 families, the largest of which are Chenopodiaceae, Caryophyllaceae, Ranunculaceae and Papaveraceae. The accounts were prepared by 29 authors, all based in the Nordic countries. My first action as a user rather than as a reviewer was to scan the pages carefully for treatments diverging from those accepted in our country. I accumulated three pages of them, involving differences in both taxonomic treatments and nomenclatural details. Some of the most significant taxonomic discrepancies are as follows: *Atriplex praecox* considered a subspecies of *A. longipes*; *Salicornia ramosissima* included in *S. europaea*; *Salsola kali* subsp. *iberica* (*ruthenica*) treated as a separate species, *S. tragus*; *Montia fontana* subsp. *chondrosperma* treated as a separate species, *M. minor*; the two morphs of *Spergula arvensis* considered as subspecies; *Sagina apetala* subsp. *erecta* treated as a separate species, *S. micropetala* (yet no mention of *S. filicaulis*); *Silene/Lychnis*

split into five genera, yet *Cucubalus* united with *Silene*; and the northern procumbent *Caltha palustris* recognised as subsp. *radicans* (yet no mention of the relevant work by Kootin-Sanwu & Woodell). Most radical of all is the treatment of *Ranunculus trichophyllus*: of the two subspecies in *Flora Europaea*, ours (*trichophyllus*) is reduced to *R. aquatilis* var. *diffusus*, while subsp. *eradicatus* is raised to specific rank as *R. confervoides*. Most examples in the above list really come down to a matter of opinion, which often diverges from region to region due to different taxonomic traditions and patterns of plant variation. It is likely that some but not all (and perhaps not most) of the Nordic treatments will find favour in Britain. *Flora Nordica* often but not always follows the most recent taxonomic literature; for example, while *Silene* has been further split, and *Roemeria* is included in *Papaver*, *Mahonia* has, surprisingly, been kept separate from *Berberis*. I also think that it is a pity that the family sequence followed is the very outdated Englerian system; more modern ones that could have been used would have more closely mirrored recent molecular-based systems.

In some ways the many nomenclatural differences are more perplexing, for surely one treatment must be right and therefore the other wrong, at least in many cases. I have not had time to analyse the divergences in Volume 2, but the results of a time-consuming study of those in Volume 1, which are only just completed, are instructive. To give two examples: of the six cases in *Salix*, the Kent List was correct in three and *Flora Nordica* in three; of the three cases in the conifers, the Kent List was correct in two and neither correct in the third. Clearly both sources could learn much from the other, yet there has been no cooperation between our countries to this end. Does chauvinism still reign supreme in taxonomy?

To those not intimately familiar with the Nordic flora there are plenty of surprises. For example they have 15 (*vice* 8) native species of *Stellaria*, four of *Anemone* and four of *Pulsatilla*; *Minuartia verna* is but a rare casual and *Moenchia erecta* does not occur at all; and the figures for *Ranunculus* (33 native species in Norden, 24 in Britain) obscure an even greater difference, since 15 of their 33 species do not occur in Britain. The special case of the apomictic *Ranunculus auricomus* aggregate, which in Scandinavia has for decades been split into hundreds of microspecies (actually treated as microsubspecies until recently) but for which no critical treatment has ever been published in Britain, deserves a mention. In the main account, the aggregate is covered in 18 pages, in which the variation is discussed and illustrated and then summarised by describing four main “grades” of microspecies. The 605 microspecies are not described, but are listed alphabetically together with synonymy, chromosome number, references to full descriptions, and distribution, in a further 16 pages at the end of the volume. I was surprised that the ‘grade’ to which each microspecies is allocated is not given.

*Flora Nordica* provides a wealth of data and ideas that will greatly assist any field botanist or taxonomist in his studies of the flora of the British Isles. Although not mentioned until now, it is the discussion under such headings as Variation, Biology and Taxonomy that frequently prove of the greatest value. Such data, singularly lacking in any modern British flora, are what turn an ordinary flora into a critical flora. They produce, for example, accounts of *Honckenya peploides* and *Sagina nodosa* each running to more than two and a half pages. The only major item that I have found lacking is the place of publication for all synonyms except the basionym, for rare casuals, and for most hybrids. *Flora Nordica* deserves our highest praise and should be used as the model to which future flora-writers should aspire.

C.A. STACE