

Book Reviews

The wild plants of Sherkin, Cape Clear and adjacent islands of West Cork. Edited by J. Akeroyd. Pp. 180. Sherkin Island Marine Station, Sherkin Island, Co. Cork. 1996. Price IR£20.00. ISBN 1-870492-86-2.

This well-produced book covers the flora of two islands off the south-west tip of Ireland, Sherkin and Cape Clear, as well as over a dozen smaller islands and groups of islets in Roaringwater and Long Island Bays (v.c. H3). Building on Oleg Polunin's work when he visited and botanised on Sherkin and adjacent islands in the late 1940s, the work for this Flora was carried out mainly in 1981 and 1982 and from 1990 to 1995 by young botanists based at the Sherkin Island Marine Station, which also financed the project.

The thorough and readable introductory sections cover the climate, geology and soils, human history and land use, vegetation history, plant communities in a wide range of habitats, botanical exploration and a brief description of the islands, with two maps. Nearly 600 taxa of higher plants, including subspecies and hybrids, were recorded as well as two charophytes. It should be noted that planted taxa are included, for example, the conifers and some willows, so that the Flora is not just an inventory of wild plants as stated in the Introduction. Because of the generally acid nature of the island soils, relatively few calcicole plants occur. However, the richness of the flora is emphasised, and this West Cork "hotspot" is compared with other good botanical areas in Ireland such as the Burren. The concentration of rare plants is noted, and a particular feature is the arable weed flora, considered to be of national significance.

Entries in the Systematic List are clearly laid out. Scientific names follow *Flora Europaea* in the main. For each taxon, English and Irish names, habitats and distribution are given, and there are often additional interesting comments. Where there are historical records, some dating back to the 19th century, they are included. Over 80 references are listed (with a few inaccuracies, e.g. Praeger's major work is *Irish topographical botany* and *The way that I went* was first published in 1937) and two appendices contain a previously unpublished manuscript and agricultural notes by Polunin. Interspersed throughout the Systematic List there are 18 pages of useful line drawings, several to a page, by Elspeth Beckett. There are also 16 pages of colour plates which mostly show habitats and close-ups of plants and eight pages of black and white plates which show views on the different islands, especially interesting to those who are not familiar with the area. However, the line drawings, plates and maps are not listed in the table of contents.

The Flora is a welcome addition to earlier publications on the floras of other Irish islands, for example, Lambay Island, Clare Island, the Aran Islands, Inishbofin, the Magharees and Foynes Island. The editor and contributors are to be congratulated on this user-friendly and comprehensive work. It provides a baseline against which future changes can be compared, and it will undoubtedly stimulate botanists and others to visit the islands of Roaringwater Bay and Long Island Bay in West Cork.

S. C. P. REYNOLDS

Flora of North America north of Mexico. Volume 3: *Magnoliophyta: Magnoliidae and Hamamelidae.* Edited by the Flora of North America Editorial Committee. Pp. xxiii + 590. Oxford University Press, New York and Oxford. 1997. Price £65.00. ISBN 0-19-511246-6 [v.3].

Inevitably, a British botanist will compare *Flora of North America* with *Flora Europaea*; the floras are not much different in number of species, and the volumes of each work are virtually identical in shape and size, but the parallels end almost there. Whereas *Flora Europaea* is complete in five volumes, the American Flora is projected to extend to 25 volumes on the vascular plants, plus an introductory volume, three covering the bryophytes, and a final one with a cumulative index and bibliography. The sequence of the vascular plants is that of Cronquist, now familiar to British botanists. The keys are indented.

The volumes have so far been produced in sequence; Volume 3 (with 56 authors) is the first one on flowering plants, covering Magnoliaceae to Casuarinaceae (equivalent to Lauraceae to Betulaceae in our flora). Volumes 1 (Introduction) and 2 (Pteridophytes and Gymnosperms) were published in 1993 (for review of the latter see *Watsonia* 21: 141 (1996)). To illustrate the more expansive treatment in the American than in the European work with *Ranunculus*, 77 species occupy 47 pages in the former *Flora* while 133 species occupy 17 pages in the latter. On a page containing only species accounts usually three species appear in the former, about ten in the latter work.

The more detailed coverage of *Flora of North America* includes a full infrageneric classification, citation of basionyms with places of publication, authorities' names in full, flowering times, vernacular names, various supplementary observations on nomenclature, taxonomy and ethnobotany, etc., thumb-nail distribution maps and very helpful line-drawings of a selection of species (e.g. 26 in *Ranunculus*), as well as a more extensive bibliography and rather fuller descriptions of taxa at all levels than in *Flora Europaea*. One item conspicuously missing is a key to families of angiosperms; the Introduction states that it "will be published separately". Most of the information provided here but not in *Flora Europaea* is extremely welcome, although in my opinion the text is often unnecessarily wordy.

The great majority of American species, even in genera familiar to us, are non-European. The number of European species (21) I counted in *Ranunculus* is probably unusually high; nine are introductions from Europe, ten are native boreal species, and two are native aquatics. The treatments of European taxa are occasionally unfamiliar to us: *Ranunculus reptans* is considered a variety of *R. flammula*; *Mahonia* ("seldom recognized by botanists") is included in *Berberis*; and *Papaver pseudoorientale* (wrongly given a hyphen), but not *P. bracteatum*, is included in *P. orientale*. On the other hand *Dicentra formosa* and *D. eximia*, and *Myrica cerifera* and *M. pennsylvanica*, are kept as separate species.

This is an excellent *Flora* and, when complete, it will rank alongside *Flora of Turkey* and the like as one of the great *Floras* of the world. Unfortunately no indication of the time-scale for completion is given. Rather than repeat the map with geographical regions on both sets of end-papers, a conspectus of families on one of them, with volume numbers and the date of publication where relevant, would be much more helpful.

C. A. STACE

A Flora of Cumbria. G. Halliday. Pp. 611. Centre for North-West Regional Studies, University of Lancaster. 1997. Hardback £42.00, ISBN 1-86220-020-3. Paperback £32.00, ISBN 1-86220-051-3.

It has long seemed to me amazing that Cumberland (v.c. 70), a county of manifest botanical interest and countless visitors, should have no *Flora* more recent than 1898. That omission has now been handsomely rectified by Geoffrey Halliday's new *Flora* which also embraces the whole of Westmorland (v.c. 69) and Furness (v.c. 69b) as well as part of v.c. 65 (Sedbergh area) and one parish from v.c. 60. It replaces W. Hodgson's *Flora of Cumberland* and A. Wilson's *Flora of Westmorland* (1938).

First impressions of the *Flora* are good. It has an eye-catching cover, the page layout and typeface are clear and the text is liberally interspersed with colour plates and figures. More detailed examination does nothing to dispel the initial reaction and amongst the preliminary essays I particularly liked the summary tour of the main botanical regions and the chapter on conservation, a more balanced account than is fashionable. Rather surprisingly the number of species recorded in Cumberland is similar to that noted by Hodgson 100 years ago, but these totals obscure losses of many casuals and over 50 native species which have largely been compensated for by new garden escapes and a small number of other natives.

The species accounts are the core of any *Flora*. For all but the scarcer species they are accompanied here by tetrad distribution maps which are greatly improved by being printed on a base map showing relief in colours. Where no map is given localities are listed, with 10-km grid reference only. For some species there are references to the distribution elsewhere in Britain which put the present findings in context. Historical records are in general only quoted where plants have not been refound. All accounts give statistics of tetrad frequency and presence/absence in each of the five vice-counties from which Cumbria is assembled, as well as the highest altitude at which the plant was found during the survey.

This latter feature applies also to the critical genera for which such data have not readily been available. There are frequent comparisons with records and comments from the previous Floras.

A notable feature of the work is the detailed treatment given to the critical genera *Rubus*, *Hieracium* and *Taraxacum* (the *Hieracium* and *Rubus* species are even mapped at the tetrad level). The accounts reflect not only a great deal of effort by the author and others in the field but also considerable contributions by the relevant specialists. For *Rubus*, *Hieracium* and a few other difficult genera the provision of keys will be a real help to the ordinary botanist and could well be found useful beyond Cumbria.

All in all, this is a work of considerable scholarship. A massive amount of information has been presented in a clear and digestible form. The colour plates are almost uniformly of high quality as well as being nicely varied. I particularly liked the choice of aerial photographs for sites like High Cup Nick and Humphrey Head which show their unique character in a way that no view from ground level could. The quotations scattered about the text came as a pleasant surprise, particularly the extracts from Norman Nicholson's poems, and when such pleasures seemed to be at an end, the wonderful Kafkaesque piece from the 1980 Wastwater/Ennerdale Public Inquiry provided entertainment of a different and wholly unexpected order.

The size (A4) and weight (c. 2.2 kg) of the volume are somewhat daunting but given the amount of information presented it could hardly be otherwise. Errors in the text are commendably few.

I can unreservedly recommend this Flora and expect it to be consulted with profit not just by those resident in or visiting Cumbria.

D. J. McCOSH

The Plant-Book: a portable dictionary of the vascular plants. D. J. Mabberley. Pp. xvi + 858. Cambridge University Press, Cambridge. 1997. Price £32.50. ISBN 0-521-41421-0.

This second edition of *The Plant-Book* is 150 pages longer than the first, has nearly 2500 new entries and almost all the longer entries have been amplified. Owners of the original are strongly recommended to upgrade. Botanists who do not have a copy should know that this wonderful book is an alphabetical list of family, generic and English names of vascular plants. Descriptions and synopses are given of the families. For each genus the family, numbers of species and distribution are always given, as well as in many cases much other information. The citing of revisions is one of the most valuable features.

To give a flavour of the book (with items new to the second edition italicised), under rose-bay willow-herb (which Mabberley includes in *Epilobium*; he tends to be conservative in his taxonomy, especially in generic splitting) we learn that it has been included in *Chamaenerion* and *Chamerion*, that it is also called fireweed *and wickup*, is cultivated for ornament, is indigenous in the North temperate region, its distribution has greatly increased in Great Britain (*where the highland populations are possibly indigenous, and the lowland ones come from America or Europe*) in the 20th century possibly through the increase in habitats (bomb sites, etc.), autogamy is almost impossible for it (it is highly protandrous, and dichogamy was first described by Sprengel from this plant), *the roots live for 20 years*, the leaves are eaten as greens by the North American Indians and are used by them and in Russia for tea, *the pollen concentrates gold, and the honey is excellent*.

The range of information throughout is fascinating, other new items including facts such as that the balls used to draw the fixtures in the F.A. Cup are made from box, that the leaf juice of *Carpobrotus* is smeared over newborn Hottentots, that McDonald's uses the potato cultivar 'Russett Burbank' for its chips, and that male seedlings of the *Salix myrsinifolia* – *S. phylicifolia* complex in N. Sweden are consumed by voles three times as much as females (there are more males on vole-less islands). *The Plant-Book* can also be very helpful in everyday life. Being over-stimulated by caffeine, I recently bought a guarana instant drink as the label said it was an uplifting alternative to tea or coffee and especially because it said "contains no coffee beans". The second edition (but not the first) tells me that guarana (*Paullinia cupana*, Sapindaceae) when dried as a tea contains "4.3% caffeine, i.e. 3–5 times that in coffee".

Errors and misleading statements (e.g. *Luronium* rootless, *Epilobium brunnescens* naturalised in N.W. England) are inevitable though disconcerting, but seem to be few. A plaintive bibliographic note on p. xvi, which the publishers unfortunately seem not to have read, observes that in the first edition the

first printing was on thick paper and without the rounded page corners to match those of the soft cover. The proper thin paper with rounded corners came only with the second printing two years later. The first printing of the second edition reverses these faults with a vengeance and is one of the nastiest pieces of book production I have seen. On good thin paper, of genuinely pocketable size, it is encased in thick boards, with sharp corners accentuated by the rounded corners within; it would destroy any pocket within minutes, and could be used to kill. Potential purchasers who need a pocketable book might await a reprint in the hope that it will then have the soft, rounded covers of the first edition.

A. O. CHATER

Plant breeding systems, 2nd ed. A. J. Richards. Pp xii + 529. Chapman and Hall, London. Hardback £75.00. ISBN 0-412-57440-3. Paperback £29.99, ISBN 0-412-57450-0.

The importance of the role of the breeding system in the evolution of plant species is widely recognised. Breeding system transitions, be they driven by subtle changes or major developmental shifts, can have profound effects on microevolutionary processes and the partitioning and maintenance of genetic variability within and among populations. This striking effect of the breeding system on genetic architecture is plainly evident to taxonomists. Deviations from random outbreeding that lead to either preferential mating within lineages, or clonal propagation, are responsible for much of the taxonomic confusion associated with many of the "difficult" groups in the British flora such as *Epipactis*, *Euphrasia*, *Hieracium*, *Rubus*, *Taraxacum* and *Ulmus*.

The publication of the first edition of *Plant breeding systems* in 1986 was an attempt to provide a synthetic volume covering a diverse array of aspects of plant reproductive biology. That the book remained in print for ten years is a testament to John Richards' success in bringing together a wealth of information in one volume and also the importance of the subject to the botanical and broader scientific community. A total of 281 citations of the first edition in the journals covered by the Bath Information Database (BIDs) is an impressive number for a book in the field of plant natural history.

The second edition of *Plant breeding systems* reflects the massive advances in the field over the last ten years, and much of the text has been rewritten. Some 500 new references are included, and the bibliography alone makes this a useful publication. The new edition supersedes the last, and in particular I found the section on self-fertilization and inbreeding informative. My only disappointment was the omission of the chapter on vegetative reproduction, as much work has been done in this area since 1986, and a summary of the work on the extent and distribution of clonal diversity and interactions would be timely. I accept, however, John Richards' point (made in the preface to the second edition) that this chapter was somewhat tangential to the rest of the book.

The second edition of *Plant breeding systems*, like its predecessor, represents a significant contribution to the field and is to be strongly recommended to all those interested in plant taxonomy, reproductive biology, population biology, ecology and evolutionary biology. Its chapters on sexual theory, sexual reproduction, floral diversity and pollination, pollination biology and gene flow, self-incompatibility, heteromorphy, dicliny, self-fertilization and inbreeding and finally agamospermy, represent a valuable and accessible summary of the subject.

P. M. HOLLINGSWORTH

Rothschild's reserves: time and fragile nature. M. Rothschild & P. Marren. Pp. xv + 242. Balaban Publishers in association with Harley Books, Rehovot, Israel. 1997. Price £15.00. ISBN 0-86689-048-3.

The history of nature conservation in Britain has been well studied by John Sheail and others, but little attention has been given as to what might have been the position today if one of the founding fathers of nature conservation, Nathaniel Charles Rothschild, had not died prematurely in 1923. Rothschild's vision was to protect and preserve the varied habitats of rare and dwindling species by setting up a nationwide network of nature reserves through the co-operative efforts of government, local naturalists' societies and private landowners, assisted by scientists within and without the United Kingdom. Such a network would encompass the geographical range of habitats and would pay particular attention to formations, such as shingle beaches, western heathlands and bogs, which were rare or unknown on the

Continent. This was being said in 1912, some 40 years before the first national nature reserves were, in fact, established. It is also worth recording that Rothschild formed the Society for the Promotion of Nature Reserves (S.P.N.C.), which later became the parent body of the county wildlife trusts and played an important role in the establishment of an official nature conservation agency in Britain.

In this beautifully written book, Miriam Rothschild (Charles Rothschild's daughter) and Peter Marren use previously unpublished documents, as well as other public archives, to explore what went on behind the scenes as Rothschild attempted to persuade and cajole other bodies and individuals to support his efforts to save Britain's wild places. One of the first things he did was to compile a list or dossier of places most "worthy of permanent preservation". Information on these sites came from a variety of sources: amateur naturalists, eminent botanists such as G. C. Druce, university-based ecologists such as A. G. Tansley and W. H. Pearsall, entomological friends and Rothschild proposed 27 sites himself. By 1915, a list of 284 proposed nature reserves in the U.K. had been compiled, of which 182 lay in England and are the main focus of study in this book.

The reasons why some sites were included and others not chosen make fascinating reading. There was a detectable bias towards coastal sites and localities for rare lepidoptera, or certain rare flowers like the pasqueflower (*Pulsatilla vulgaris*) and orchids. Mesotrophic grasslands, including sites famous for attractive species such as *Fritillaria meleagris*, were ignored on the grounds that they were associated with human occupation and intensively managed as hay-meadows. Oolitic grassland in Northamptonshire (near Rothschild's home) was well-represented whereas large tracts of similar grassland in the Cotswolds were ignored. Woods and uplands were under-represented, possibly because the threat from conifer plantation was not perceived at the time. Some large areas, such as the New Forest, Ashdown Forest, The Mendips and the Norfolk Broads, were included but the main interest lay in protecting areas of special interest within them.

The aim was to distribute "reserves as evenly as possible over the whole country" but there was a strong degree of bias in the England list towards southern counties which reflected surveyors' interests and knowledge (the same potential bias was one of the things we tried to avoid in the Nature Conservation Review of 1977!).

With all their limitations and oddities, the "Rothschild lists" were a milestone in the history of nature conservation in Britain. Some measure of their worth may be judged by the fact that most of the sites are now scheduled as Sites of Special Scientific Interest. A large proportion are now nature reserves and many formed the core from which the initial tranche of National Nature Reserves were selected when the Nature Conservancy was set up in 1949.

About two-thirds of this book is devoted to what became of the 182 "Rothschild Reserves" listed for England. The same formula is used for each site. Its original character and the reason for its selection is given, together in many instances with the names of the people most associated with the site. This is then followed by a brief account of what has happened to the site over the past 70 years or more and ends with a succinct assessment of the main effects.

Assessments range from "no overall loss" (Barton Hills, Bedfordshire), through "severe loss from habitat destruction (ploughing, reseeded and fertiliser)" (Aston Upthorpe Downs, Berkshire) to "complete destruction of botanical interest within the proposed reserve" (Babbicombe Cliffs, near Torquay).

The thumb-nail sketches of each of the 182 reserves are gems in themselves and as they are arranged alphabetically, readers can easily find out about sites which they know and love. What makes this book so readable and enjoyable are the snippets of information which illustrate the foibles of human nature and how these have affected the survival of a particular reserve or site. Regarding the fate of Braunton Burrows N.N.R., "the military's proposals to lay down an 18-hole golf course there were fortunately averted after Miriam Rothschild invited the C.O. to lunch and convinced him of its disadvantages, with the help of a bottle of Chateau Lafite". O for modern administrators with such foresight and good taste! A second example concerns the shingle beach at Dungeness, Kent, whose preservation Rothschild regarded as "of the utmost priority". This site contained ancient holly groves which are unique in Europe but the main interest has always been ground nesting birds, including the rare Kentish plover, and the R.S.P.B. had for long taken the lead in opposing any threats. Unfortunately, they did not oppose shingle extraction and today half the shingle is gone and only 28% remains intact. The last blow was the nuclear power station, built after a bitterly contested public inquiry in 1957. The last two sentences succinctly summarise what has happened to Dungeness "half of Rothschild's Dungeness lies beneath Britain's motorways. Its story is a national scandal".

The text of the book is interspersed with black-and-white photographs of some of the more important personalities involved in the story of Rothschild's Reserves. These, and other photographs of the original maps on which the reserves were marked, and old photographs of sites such as Cheddar Gorge and Box Hill, provide added interest to a text which is a joy to read. The book also has a fair smattering of colour photographs of sites and key species which further enhance the text.

I unreservedly recommend this book to all who have an interest in nature conservation and particularly to those who would like to know more about how nature reserves were selected and what became of them.

T. C. E. WELLS

Cultivating women, cultivating science: Flora's daughters and botany in England, 1760–1860. A. B. Shteir. Pp. xi + 301. Johns Hopkins University Press, Baltimore, Maryland, U.S.A. & London. 1996. Price £20.50. ISBN 0–8018–5141–6.

Do not be put off by the main title: as the subsidiary one indicates, this book introduces us to a remarkable range of women botanists in England over a century that saw enormous social change, not least in the place of women in the society in general. Most of us, I feel, would be hard put to it to mention a single woman author of a botanical book in the period covered. In my own case, Anne Pratt, whose children's book *Wild flowers* (1852–3) was reprinted many times in the Victorian period, was the only one I would have known before reading Ann Shteir's fascinating book. Perhaps my single author was an appropriate choice for a B.S.B.I. member, for here is how Anne Pratt begins her book:

"Every child who has wandered in the woods in the sweet months of April and May knows the Bluebell or Wild Hyacinth."

Younger members of the Society will, of course, be familiar with the English Bluebell as the Society's logo (though they may not know that it was only recently adopted, to replace the earlier, grossly inappropriate, though patriotic, *Victoria* water-lily). And it is good to think that our Society's predecessor, the Botanical Society of London, founded in 1836, did not hesitate to admit women as full members, so that Anne Pratt could well have been an early member – though there is no evidence that she joined.

Ann Shteir's book, like much modern American "women's writing", is *parti pris*. Her general thesis is that able and devoted English women throughout the century from 1760 (a random starting point) could study botany, as opposed to most other sciences, by operating "within the dominant gender ideology of the time". She makes a convincing case for seeing the period as consisting of an earlier "Enlightenment" phase where, for both men and women, rational science was an acceptable pursuit for the aristocracy and the members of the increasingly numerous professional class, and a later, more complex and difficult late Georgian and early Victorian culture, in which both the rise of professional science and the spread of an evangelical, often relatively illiberal theology within the established Church made the society more overtly opposed to most movements for equality in educational opportunity between women and men.

So much of Shteir's material is new to me that I hardly know where to pick to illustrate how rich and varied is this feast of learning. I was especially pleased to learn that one Elizabeth Warren, helped greatly by the elder Hooker, published the first botanical wall-chart as early as 1839. Entitled *Botanical chart for schools*, it set out the Linnaean classes and orders, and lists typical genera, but unfortunately did not sell well.

One weakness of the book reveals itself fairly quickly: there are occasional botanical errors which might have been avoided. On p. 155, for example, there is a short passage which purports to explain how and why the natural system of plant classification associated with de Jussieu and de Candolle gradually gained acceptance over the sexual system of Linnaeus. This passage fails to clarify the essential differences between the two systems, partly by apparently using the term "physiological" in a now wholly outmoded way; and we are told that "it was Candolle who grouped plants in monocotyledons and dicotyledons" – with no acknowledgment that John Ray had in fact done just that over a century earlier!

One delicate subject crops up throughout the book: the anthropomorphised sexual parts of the Linnaean flower. Is this *really* a suitable subject for ladies? Generalising, one might say that censorship

of phrases like “two husbands in one bed” for *Diandria Monogynia* was more obvious in the popular books of the early Victorian period than it was in the late eighteenth century. But Shteir’s numerous examples show a surprisingly wide range of reaction, and no simple generalisation is possible.

The volume is handsomely printed and bound, with an excellent bibliography and index. It should be in every institutional botanical library, and deserves a place in the private libraries of all botanists, amateur and professional, with any interest in the history of their science.

S. M. WALTERS

Notes on the British and Irish orchids. D. M. Turner Ettlinger. Pp. 161. Published privately by the author (Royden Cottage, Cliftonville, Dorking, Surrey). 1997. Price £17.95 + £0.85 p. & p. ISBN 0-9530380-0-9.

This book is a genuine novelty – an illustration-free iconograph! Derek Turner Ettlinger has devoted much of his life to photographically documenting all of the variation shown by European native orchids. Surprisingly, despite the general popularity of illustrated books on orchids, potential publishers fought shy of the concept of a comprehensive iconograph of the British and Irish taxa – we are left with only the superb cover illustration of a hyperchromic *Dactylorhiza fuchsii* to hint at what might have been. Instead, the author was eventually obliged to scale down the project as first conceived to these expanded notes, originally intended to supplement the photographs. The result is a slender softback, published by the author and therefore inevitably rather expensive, but for me at least sufficiently stimulating to warrant the cost.

Ettlinger believes that detailed studies of morphological variation capture the essence of evolution. More controversially, he also believes that recent “popular” taxonomic treatments such as Delforge’s *Orchids of Britain and Europe* (1995) strongly emphasise species over infraspecific taxa and hence are unjustifiably “flat”, in contrast to more hierarchical treatments such as Sundermann’s *Europäische und Mediterrane Orchideen* (3rd ed., 1980). Yet more controversially, he believes that every minor variant merits formal taxonomic distinction (but adds that he lacks “the facilities” to perform the necessary taxonomic changes). His thoughtful and clearly expressed taxonomic philosophy is captured primarily in six all-too-brief introductory pages and 21 pages of enumerated “Notes”, irritatingly aggregated near the back of the book. Between are sandwiched 95 pages of taxonomic descriptions, short and sharp, informal and informed. The author readily admits that these need to be read in conjunction with a comprehensive iconograph such as that of Delforge and, as befits a study of variation, he eschews oversimplistic dichotomous keys. A sometimes idiosyncratic glossary and critiqued bibliography complete the ensemble.

Ettlinger determinedly tackles several sacred cows. Most are in my view successfully sacrificed. Most of the uncritical assertions of interspecific hybridisation still so popular in orchidological circles are given short shrift (see also Pridgeon *et al.*, *Lindleyana* **12**: 89–109, 1997). Well-intentioned but misdirected conservation measures are epitomised by the potentially lethal effect of slug pellets on the essential mycorrhizal fungi of the saprophytic Ghost Orchid, *Epipogium aphyllum*. Chastising the wilful reluctance of many orchid systematists to take satisfactory account of morphological overlap between supposed “morphospecies” inevitably raises the perennial spectre of the dactylorchids. He further debunks popular errors regarding certain diagnostic characters, geographic distribution and phenological constraints, including incorrect assertions of monophyly. Other cows scotched in passing, notably the “God Objectivity and his disciple Statistics”, might have been better left unmolested (but then I too am biased on this topic!).

Unusually explicit statements of the taxonomic rationale used throughout the book are laudable. Presumed isolation mechanisms are prioritised over degrees of morphological differentiation for both species and subspecies, with non-isolated morphs being assigned to a large number of varieties. This is logical, though I would treat some of these entities as formae and leave the rest wholly outside the realms of formal taxonomy. Ettlinger’s bravery extends to the imperfect art of prediction, notably regarding taxa that have thus far passed unrecorded but should be British natives, the arguably natural origins of several recent “adventive” occurrences, and the likely beneficial impact of the battery of modern molecular techniques on delimiting native orchid taxa and determining their relationships. This revolution has in fact already begun (e.g. Hedren, *Plant systematics and evolution* **201**: 31–55, 1996;

Bateman *et al.*, *Lindleyana* **12**: 112–141, 1997) and, somewhat ironically, may well undermine some of the more controversial taxa recognised in this book: examples include *Epipactis youngiana*, *E. helleborine* subsp. *neerlandica*, *Dactylorhiza majalis* subspp. *cambrensis*, *ebudensis* and *lapponica*, *D. majalis* subsp. *traunsteineri* var. *bowmannii* and *Orchis mascula* subsp. *ebudium*.

Overall, the ever-growing legion of orchid enthusiasts will find much of interest in this individualistic, rational and educated update on current knowledge of our native orchids. It is without doubt sufficiently provocative to gather the extensive emarginations explicitly encouraged by the author.

R. M. BATEMAN

The new Oxford book of food plants. J. G. Vaughan & C. A. Geissler. Illustrations by B. E. Nicholson, E. Dowle & E. Rice. Pp. 239. Oxford University Press, Oxford. 1997. Price £25.00. ISBN 0-19-854825-7.

A new edition of that most valuable reference and teaching aid, *The Oxford book of food plants* (1969), has long been overdue. Now we have it, and this welcome reissue comes too in a much updated, expanded and reworked version. The revised work has certainly absorbed an upbeat contemporary feel, yet retains its classic, slightly old-fashioned air of authority and respectability. The text is full of useful information and avoids the contemporary trend to dumb down popular science. The plates are elegant and informative.

The book is laid out, in both editions, with the simplicity of W. Keble Martin's *Concise British Flora*: colour plates (95 in all) on the right, explanatory text (unlike the *Flora* usually filling the page) on the left. Crops, with some wild plants, are arranged by family or by structure: leaf, petiole, root, etc. Here is a celebration of edible plants, their central role in our lives and the efforts of generations of farmers and gardeners who carefully selected and nurtured the crops that we eat today.

This is truly a new book, in both textual and species content. The last three decades have seen plant foods in Britain derived from more cosmopolitan sources than ever before. Our affluent, seemingly food-obsessed society has taken to its heart large numbers of novel (at least to us in the West) fruits, vegetables and grains, especially from the Mediterranean and Orient. Mass communications and expanded trade and travel make the world a smaller place than in the 1960s, and immigrants from all over the globe have brought us their own cuisine and allotment crops (and the odd weed). This copiously illustrated book provides a handy means of identifying foodstuffs, seeing what they look like in a native state and how they are related to each other taxonomically and in plant structure. Students especially have here a ready source of information about the cultivation, geography, history and nutritional content of food plants.

The plates are slightly clearer and more luminous in the new edition. They are also set off nicely by a wider page border. Plates added to this edition include prickly pear and kiwifruit, icon of the upwardly mobile fruit-salad; several types of squash, a frequently undervalued vegetable (in the U.K. at least) now popularized by Hallowe'en and Prize Pumpkin shows; and the severer pseudo-cereals like buckwheat and, from the high Andes, quinoa. These last two are increasingly appearing in the British countryside as food for game birds.

Other helpful additions are a revised, longer Introduction, a list of books for "Recommended reading" and separate subject and species indices. The final section on nutrition has evolved into a substantial 26 pages, including tables of food value. These, and a new title "Nutrition and Health", will probably capture a wider readership among students of cookery, food and health. The unkind reader might well detect a nasty whiff of Matron, or even of the prigs and bullies at the Department of Health.

Expanding the range of plants covered not only updates an indispensable work and makes it even more useful, but also emphasises the diversity of plant foods and how all plants need protection. Nobody knows, least of all the powerful plant breeding lobby and its acolytes in academia and government, just which cultivated and wild plants, intraspecific taxa and gene combinations we shall need in the long-term. Conservation of wild and cultivated food crops, even the obscurer leaves and tubers, is vital for us all and for future generations. *The new Oxford book of food plants* is an educational tool towards this end.

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