

Book reviews

Exploring environmental history: selected essays. T. C. Smout. Pp. 248. Edinburgh University Press, Edinburgh. 2009. Hardback. Price £60.00. ISBN 978-0-7486-3513-9.

After a career as an economic and social historian, T. C. Smout, Historiographer Royal for Scotland, turned to environmental history after reading Oliver Rackham's book *The history of the countryside*. This attractively produced book includes 13 essays he has written on the subject in the last two decades. Although they have been published previously in books, journals, conference proceedings or *Festschriften*, most will probably be new to B.S.B.I. members (I had come across only three of them previously). Many have been revised for republication or extended to discuss subsequent criticism. Their focus is Scottish, but like all good essay writers Smout leads the reader from the particular to more general considerations.

In the first essay, Smout contrasts the American approach to environmental history, which describes "misunderstanding and violent misuse" of wilderness areas, to the European writers who deal with a long-settled continent. Clearly the European and American experiences are very different, but is it simply a difference in timing? Is Smout's view of the European experience before 1945 as "relatively benign and gradual landscape change" only possible because we have forgotten what riches we once had, and because time has mellowed the impact of forest clearance, fenland drainage and the agricultural improvement that followed parliamentary enclosure?

Turning to Scottish matters, 'The Highlands and the roots of green consciousness, 1750–1990' explores the paradox that appreciation of the Highlands has usually come from outsiders, although these can be divided between those who regard the area as a giant adventure playground and those who resort to it for spiritual renewal. The figure of Frank Fraser Darling (1903–1979) looms large in this and other essays, and he really deserves an essay to himself. He was an Englishman (I was surprised to learn) and a visionary inspired by a completely erroneous view of Highland history. Another theme is the question of who should decide on policy in the Highlands. Smout argues provocatively, but surely correctly, that they "belong to a wider British society than seems to be visible from Inverness".

The next seven essays deal with woodland history, the history of bogs, agricultural improvers in Scotland and a comparison of Scotland, Ireland and Iceland. The main conclusions reached by Rackham and other woodland historians are supported by these studies: most woods were cleared in prehistory, surviving woods are not destroyed simply by clear-felling (in the east, at least) and are preserved by use but disappear if they have no use. There are, however, very distinctive themes to Scottish woodland history. Woodland was never valued as highly as in lowland England as peat was preferred as a fuel, stone was all too plentiful as building material and the east-coast towns could easily import timber from Scandinavia. The availability of peat, Smout considers, helps explain the low percentage cover of woodland in Scotland and Ireland (the failure of the Icelanders to manage their birch woods sustainably is less easy to understand). In the highly oceanic west there is some evidence to suggest that regeneration of pine woods sometimes failed after clear-felling, leading to woodland loss. In the Scottish climate, woodland was particularly important as winter shelter for cattle. Landlords had more power than their counterparts elsewhere and the balancing of competing interests which is such a feature of English woodland history is less apparent in Scotland, although comparison is difficult as Smout writes about the period from 1600 onwards whereas English woodland historians often concentrate on earlier centuries. Smout touches on the myth of the Great Wood of Caledon, recently espoused by the Green Party ("history does not have to be accurate to be influential: too much of human experience suggests that the more inaccurate it is, the greater its leverage"). He also examines the association of trees with historic figures such as Mary Queen of Scots, John Knox, Rob Roy and Bonnie Prince Charlie. Most, he thinks, are "another fruit of the Romantic imagination", an identical conclusion to that reached independently in England by David Coombe in his excellent essay 'Of Milton and mulberries' hidden away in *Christ's College [Cambridge] Magazine* 72: 15–20 (1987).

As Smout points out, environmental history covers many disciplines but “there are not many polymaths”. The botanist will regret the absence from his woodland history of any consideration of plants other than trees. Questions which we would like answered are not even asked. Does Scotland have fewer plants restricted to woodland than lowland England, and, if so, is the explanation climatic, a reflection of the differing landscape or historical? What long-term effects have cattle had on the vascular plants, bryophytes and lichens of Scottish woodland? Little ecological work is cited in the essays, not even the highly pertinent analyses of the problems of being a tree in an oceanic environment published by Smout’s fellow emeritus professor at St Andrews, R. M. M. Crawford. Despite these omissions, I was still taken aback to read a description of Tansley and his colleagues’ ecological work in the 1940s and 1950s as “in danger of becoming an arcane ‘pure’ science unrelated to the social sciences and so irrelevant to society”.

The last four essays are a more miscellaneous group. The most important one, ‘The alien species in twentieth-century Britain: inventing a new vermin’, has already proved influential. Smout shows that concern about problematic alien species (the new vermin) has

recently been extended to cover all alien species, and alien genotypes of native species. He makes a strong case against this blanket condemnation. However, his argument that there is a philosophical problem in distinguishing native from alien species because it “rests on a view that humanity is not part of nature” leaves me unconcerned. If that is a problem, it is one that can be left to the philosophers.

This is an immensely stimulating book. As someone unfamiliar with modern historical writing, I particularly appreciated the way Smout takes recent historical approaches and applies them to Scottish environmental history – his analysis of history in terms of energy wealth, for example, or the idea that before 1800 societies were more anxious to minimise internal social friction and economic risk than to maximise the use of resources. All the essays are superbly written, as Smout refuses to use “the preposterous language of post-modernism” and scorns geographers who “are fond of saying that we ‘construct’ nature, though in reality they cannot even construct a wren”. The book is therefore not only a painless introduction to modern environmental history but a positive pleasure. If you think £60 is too much to pay for a relatively slender volume, order it from your local library.

C. D. PRESTON

Flora of Great Britain and Ireland, Vol 3., Mimosaceae - Lentibulariaceae. P. D. Sell & G. Murrell. Cambridge University Press, Cambridge, 2009. Hardback. £130.00. ISBN 978-0521-55337-7.

The third of the five volumes of this massive work details many important families: Scrophulariaceae, Lamiaceae, Apiaceae and Fabaceae for instance. There are few surprises in format or approach, so that generalities voiced in reviews of earlier volumes (*Watsonia* 22: 122–3, 28: 100–1) are not repeated here. The present volume concerns more families with woody plants however, and it becomes evident that the authors have attempted to treat almost every tree and shrub planted outside domestic gardens. How many of the 34 *Eucalyptus* or 24 *Acer* ever become naturalised here?

When most subsidiary taxa are subspecies or varieties it becomes evident that placing of infraspecific taxa before the species accounts of distribution, ecology and origins causes the latter to become confused; a good example is

Anthyllis vulneraria. Also, infraspecific taxa are included in the generic keys, causing the latter to become unnecessarily cluttered. It would have been better if infraspecific taxa had been keyed out separately under each species.

In comparison with earlier volumes I did detect two welcome changes of emphasis, which may reflect the taxa covered here. Accounts of crop plants and herbs are often accompanied by informative descriptions of their history, culture and usage. Also, there are anecdotal accounts of observations made by the authors in their native Cambridgeshire. For instance, they note that that presumptively native *Anthriscus sylvestris* var. *syvestris* is replaced by apparently adventive var. *latisecta* not only as you travel south, but as you approach village boundaries. Rather than giving the Flora a Cantabocentric spin, these

touches, and there are many, add an important and accessible context to minor taxa.

I have to say that I disagreed with some of the terminology used. For hermaphrodite (or in American 'cosexual') flowers, the term 'monoecious' is used commonly (although not for every family), but this term usually implies that both male and female unisexual flowers co-occur. Many of the statements regarding status are rather arbitrary. *Ajuga chamaepitys* is said to be native and *Lamium amplexicaule* to be introduced, without qualification. I doubt if many people would wish to be dogmatic about either, whatever, in the context of archaeophytes, these words mean anyway.

In such a vast work, distributional and ecological errors are inevitable, although some may mean that insufficient revision occurred after the publication (2002) of 'The New Atlas'. *Veronica praecox* occurs in Oxfordshire, *Orobancha purpurea* in Cumberland, *Ligusticum scoticum* is still in Northumberland, *Polemonium caeruleum* has two native sites there, *Gentiana verna* has been introduced into north-west Scotland and *Geranium sanguineum* var. *lancastricense* is widespread in Cumberland. *Ulex gallii* does not occur 'in suitable habitats throughout'. It is absent from most of eastern England. *Melampyrum sylvaticum* is extinct in England.

There are other errors. The *Trifolium* key is a terrible mess (lead 14 should be 16), even if you are reconciled to the *T. repens* aggregate appearing twice (why?) and know the

difference between 'pinnately trifoliolate and digitately trifoliolate' which I regret to say I don't, and the glossary does not help. This seems to be the main means of separating *T. occidentale* (there are others!). *Polygala serpyllifolia* flowers are not 'mainly blue', at least round here, where *Astragalus danicus* is mostly a plant of fixed sand.

There are a number of new taxa and combinations. *Euphrasia salisburgensis* becomes *E. hibernica*, and *E. reayensis* and *E. notata* are described from the Highlands. The allotetraploid hybrid between *Centaurium litorale* and *C. erythraea* in Lancashire is raised to specific level as *C. intermedium*. *Ononis repens* has been controversially lost and is *O. spinosa* subsp. *procurrens*. There are spiny versions of *O. repens*, but it is possible to separate the taxa on several other characters and they have different ecologies. *Gentianella anglica* (including *cornubiensis*) and *G. uliginosa* have become varieties of *G. amarella*, thus downgrading two endemic taxa at a stroke. The 'Giant Hogweed' is no longer *Heracleum mantegazzianum*, but it is not yet clear to which taxon most of our fast-spreading monsters belong.

As for previously published volumes, it is for the comprehensive accounts of aliens, and the detailed infraspecific taxonomy that most people will want to acquire this expensive volume. It remains to be seen whether this work will engender a new enthusiasm for subspecies and varieties.

JOHN RICHARDS

The wild flora of Kew Gardens: a cumulative checklist from 1759. T. Cope. Kew Publishing, Kew. 2010. Paperback. £30.00. ISBN 978-1-84246-401-4.

This checklist of a comparatively small area (300 acres or 120 ha) underlain by Bagshot sands and gravels reveals a surprisingly high level of plant diversity; whether this is due to a high level of deliberate or accidental introductions, or intensity of recorder effort (with an cadre of expert taxonomists close at hand), or because of the vagaries of management or neglect of uncultivated areas within the garden, is not entirely explained. Tom Cope, supported by many colleagues, began to survey the Kew estate in his own time, and latterly this work was recognized as a valuable contribution to Kew's aim of

preserving biodiversity on its home turf. The result is a fascinating micro-flora of London's best-known botanic garden covering the whole period from the decade of its foundation to the present day.

In total, 1,032 first records of 'wild' vascular plant taxa were made at Kew, including archaeophytes. In the checklist, species which were only ever found in cultivation at Kew are highlighted in pale blue; the remainder are treated as accidental, either as survivors of the original native flora or as adventive introductions or escapes from cultivation. In the early years of the botanic garden, a surprising

number of native British species were cultivated at Kew, as is shown by Hill's *Hortus Kewensis* of 1768, but this reflects a more general interest during the latter part of the 18th century in the cultivation of native species of the British flora, much to the detriment of certain rarities such as *Cypripedium calceolus* (recorded growing at Kew in 1768 by Hill). Although records have been included from the herbarium of Rev. Samuel Goodenough, one of the earliest visitors to the garden, there does not seem to have been any notice taken of the Kew collections in the herbarium of Sir James Edward Smith at LINN.

Some of the later records of Kew's wild flora were published in the various reports of the Botanical Exchange Club in its various guises; Dr Cope has provided a most useful appendix in which the various un-numbered parts of these publications are given informal part numbers, making it possible to cite and date the records more accurately.

Although at £30 this is a rather ambitiously priced paperback, it can be recommended as a thoroughly scholarly and detailed account of the wild flora of England's premier botanical garden.

JOHN EDMONDSON

Grasses of the British Isles. T. Cope & A. Gray. B.S.B.I. Handbook No. 13. Botanical Society of the British Isles, London. 2009. Paperback. £18.00. ISBN 978-0-901158-420; Hardback. £21.50. ISBN 978-0-901158-413.

Grasses are one of the most interesting groups of angiosperms, due to their broad distribution in all continents and to their ecological and economic importance as leading components of diverse ecosystems and main sources of food, forage and energy. The new handbook of the B.S.B.I. contributes to increase the knowledge of the grass family in the British Isles through the revision of its largest monocot group. The work by Tom Cope and Alan Gray constitutes the largest handbook, with 220 species described and illustrated, published so far by the B.S.B.I. This book is an updated version of the classical "Grasses: a guide to their structure, identification, uses and distribution in the British Isles" by C. E. Hubbard (1954, 1968, 1984 editions, the latest revised by J. C. A. Hubbard), which was a baseline reference for most agrostologists and amateur botanists in Europe.

One of the main advantages of the new handbook, apart from extending the number of described and illustrated grass species from 158 to 220, is that this provides a uniform and systematically ranked succession of keys and descriptions, starting from tribes, to genera within tribes, and then to species within genera. This facilitates the user to frame systematically each species within its higher rank groups and, at the same time, avoids redundancy in descriptions of features common to higher ranks. The described grass taxa are systematically arranged following the classification adopted in the work of Clayton &

Renvoize (1986) for suprageneric categories of world grasses. However the authors have deliberately ignored contributions from recent grass phylogenetic studies that depart from Clayton & Renvoize's system.

The descriptions of the species are concise and accurate, the measurements have been reassessed and additional data on cytogenetics, ecology, infraspecific divisions and hybrids have been appropriately documented and discussed. The book is magnificently illustrated. The authors have chosen not to describe or illustrate some organs or parts of the plant (e. g. anatomical leaf-blade sections, except in some *Festuca* species) that could provide taxonomical characters, or others (e. g. lodicles, ovaries, seeds) that could be of interests for taxonomists and breeders. Apart from slight differences in the inclusion or exclusion of some recently introduced aliens, compared with other recent Floras of the British Isles (e. g. Stace 2010), the book broadly covers 113 native and 60 introduced grass species with the exception of cultivated bamboos. The regional distributions of the grasses are derived from the *New Atlas of the British and Irish Flora*, and the synonyms have been concisely summarized in the Index to genera and species. This is a remarkably portable book that will be extremely useful to all those field botanists and amateurs that want to identify and acquire a deeper knowledge of the diversity of the western European grasses.

PILAR CATALÁN

Cotoneasters. J. Fryer & B. Hylmö (foreword by Roy Lancaster). Timber Press, Portland. 2009. Hardback. £30.00. ISBN 978-0-88192-927-0.

Cotoneasters are very common in the urban and suburban environment and commonly naturalise as they have fruit which is attractive to birds and seeds which germinate and establish readily. In the wild they are mainly species of dry habitats, often in scrub in relatively dry climatic regions. Most of the forty or so species which have become naturalised in the British countryside are apomictic, and some have become quite seriously invasive, especially on chalk and limestones. However, as the native *C. cambricus* is itself apomictic, there is no risk of genetic contamination, and apparently the presence of the naturalised species to some extent protects the native species.

Only a very few species are commonly cultivated and these are not necessarily the most attractive – just the ones known to landscape architects and propagated by nurseries. Unlike many Timber Press monographs, this one provides keys to almost all the species described, those which aren't keyed being annotated 'not in key'. Anyone who has worked with apomictic genera such as *Sorbus*, *Taraxacum* or *Hieracium* knows how much work a publication such as this has involved, as the differences between similar microspecies can be very slight, especially on the herbarium sheet. However, when these differences involve height, habit, or colour, they can make a large difference to the appearance of the living plant.

This monograph seems to be primarily aimed at a horticultural audience, but it is also likely to be the standard botanical reference for the genus for many years. It is a pity that so few professional botanists take on such systematic monographic work, especially on woody genera. We are therefore greatly indebted to these two amateurs who have not had the security of an institutional post and salary while carrying out their work. The authors are relatively unusual in the taxonomic fraternity in that they have also grown the plants they study. They clearly know the plants extremely well in the living state as well as in the herbarium. One situation where this is particularly evident is where a species whose chromosome number is unknown is noted as being apomictic because it grows true from seed. This knowledge has required many years of experience raising plants from seed and noting the variation

(or, more usually, the lack of it) in the offspring. It is clear that, as in related genera such as *Sorbus*, *Malus*, and *Crataegus*, all diploids are probably sexual (whether self-compatible or self-incompatible), while all polyploids (triploids, tetraploids, pentaploids and hexaploids) are almost totally apomictic, though it is perhaps not stated in as many words. The apomictic *Cotoneaster* species are pseudogamous, requiring pollination for endosperm production and seed set even though the embryo is produced asexually. As stated, most of the apomictic species are tetraploid. This is because they are usually highly pollen fertile and so can self-pollinate. Uneven ploidy levels such as triploids are often largely pollen sterile and so require pollination by another species to induce seed set and are therefore usually less free fruiting, and therefore less attractive horticulturally.

I have very few criticisms. It would have been interesting to hear something of the authors' ideas on the evolution and phyto-geography of the genus, what the ancestral *Cotoneaster* might have looked like, and the directions of evolution within the genus. However, with so many polyploid apomictic taxa of uncertain origin this might be difficult. The publication of this book, and especially the comment that there are only about 10% of the known species are diploid and sexual, has already led to at least one molecular phylogeneticist recognising the genus as particularly interesting and obtaining material from the diploids available. I would like to have seen more information on which collections have given rise to the populations in cultivation and perhaps collection numbers for the chromosome counts. However, this would probably be of interest to a very limited number of readers and may have been excluded by the editors. Proof reading seems to have been very thorough and I have only, so far, detected one minor error, the omission of the nutlet number for *C. bullatus* in the key on page 220 – the answer would seem to be (4)5 from the description.

At £30 this book is very good value for such a thoroughly researched and well-produced monograph likely to remain the standard work on a very important genus for a very long time.

H. A. MCALLISTER

A Flora of Suffolk. M. N. Sanford & R. J. Fisk. Pp. 552. D. K. & M. N. Sanford, Ipswich. 2010. Hardback. £40.00 ISBN 978-0-9564584-0-7.

I share the popular distrust of glossy books, as their glossiness is often a sign that appearance has been given priority over content. My heart sank, therefore, when I opened this extremely glossy Flora, but it did not take me long to realise that this first impression was quite wrong. *A Flora of Suffolk* is in fact an excellent account of the charophytes, bryophytes and vascular plants of Suffolk, one of the most rural and attractive of the English counties and one which, we are told, is “far from flat”, reaching 128 m at its highest point.

In ‘A personal introduction’, Martin Sanford tells us that his mother’s family have lived in Suffolk for at least twenty generations, and the book is imbued with a sense that the plants we see in the county are the result of thousands of years of human occupation and exploitation of the landscape. The introductory material devotes 20 pages to landscape history and draws on numerous works by Suffolk authors such as Thomas Tusser’s *Five hundredth pointes of good husbandrie* (1573) and Robert Reyce’s *Breviary of Suffolk* (1618), as well as on the published accounts of visitors. A fascinating series of graphs shows changes in the acreage of cultivated crops and the numbers of farm animals since 1860 (though plotting the graphs over a relevant photograph gave me an unpleasant feeling of sensory overload). This is followed by an account of the habitats of Suffolk, illustrated by photographs and coincidence maps of their characteristic species. Although Suffolk has, like everywhere else, suffered greatly from agricultural improvement in recent centuries (as shown, for example, by a map of the reduction in heathland from 1783 onwards), a surprising number of fragments of species-rich habitats survive inland, and the coast has some extensive, and often surprisingly quiet, tracts of semi-natural habitats.

The Victorian Floras of Suffolk, by Henslow & Skepper (1860) and Hind (1889), were rather pedestrian. *Simpson’s Flora of Suffolk* (1982) was the only 20th century account and in this book Sanford does not really face up to its limitations. Francis Simpson is clearly a local hero but outsiders are not likely to be convinced by the description of his Flora as “a classic of its kind”. It is in fact *sui generis*, one of the most eccentric of Floras and one which

contains some original material of great interest but few localised records in the Flora (or its supporting archive) and rather too many dubious records, especially of hybrids, which are not backed up by voucher specimens. The absence of a large corpus of detailed older records limits the opportunity to analyse change in the Flora. In an introductory chapter Martin Sanford makes the best of the available material, listing extinct species, discussing native colonists, showing that few species have changed significantly at the 10-km square scale and demonstrating that change in the county parallels that in Britain as a whole (the main exception being a group of arable weeds which are declining nationally but holding their own in the county). However, the species accounts show the alarming decline in recent decades of some of the rarest species in the county, particularly the Breckland perennials *Artemisia campestris*, *Festuca longifolia* and *Thymus serpyllum*. An interesting table quantifies the extent to which species are Suffolk specialities.

The species accounts give details of the habitats of all Suffolk’s species and cite localities for the rarer plants. Local specialities such as *Primula elatior*, *Pulmonaria obscura* and *Trifolium ochroleucon* are particularly well-covered, as are some charismatic aliens including *Fritillaria meleagris* and (in Suffolk) *Colchicum autumnale*. Like the introductory chapters, these accounts draw on a wide range of sources. Take as an example *Ribes uva-crispa*, an ordinary species about which few Floras have anything interesting to say. Although it is often thought to be native, we learn that Edward I’s fruiterer imported bushes from France in 1275, paying threepence each, “hardly likely if it was growing here as a native”. Sanford then draws on *The vocabulary of East Anglia* (Dawson Turner *et al.*, 1830) in his discussion of its English name Feaberry, its abbreviation to Feabes (pronounced Fapes) in East Anglia and its relationship to Fapes Hill near Finningham. Tetrad maps are provided for many species, often showing records over an appropriate soil or habitat map. Many species show patterns determined by the light Breckland soils in the north-west of the county and the Sandlings of the east, with a large wedge of clay between them. The maps usually show records from 1980 onwards, with earlier

records occasionally included as a separate symbol. The maps are admirably clear, although some of the attempts to map three taxa together (e.g. *Silene alba*, *S. dioica* and their hybrid) are over-ambitious. The occurrence of naturalised populations of native species is often mentioned in the text but unfortunately these records are not distinguished on the maps. Photographs occur throughout the text. They are mainly sharp, rather clinical close-ups, some of them of disembodied flowers, which usefully compare some similar species but rarely provide any sense of place (those of *Lupinus arboreus* and other coastal species are splendid exceptions). A few photographs of native species (e.g. *Caltha palustris*, *Nymphaea alba*) appear to represent alien genotypes, and that of *Juncus bufonius* agg. looks to me as if it could be *J. foliosus*, which is not otherwise mentioned in the Flora.

The Flora integrates records from B.S.B.I. national projects, county surveys of churchyards, protected roadside verges, nature reserves, ponds and veteran trees, 'Phase II' surveys of grasslands and woodlands and tetrad recording specifically for this Flora. The coverage is good, especially in the north of the county where an experienced team who cut their teeth on *A Flora of Norfolk* (1999) contributed many records. There are excellent accounts of some infraspecific taxa, such as the subspecies of *Medicago falcata* and the taxa of the *Prunus domestica/spinosa* complex. In general, however, recording of difficult and critical taxa is similar to the national average, so that *Lycium* records have to be aggregated, most recorders have not distinguished the subspecies of *Ranunculus ficaria* and the commoner *Salix* hybrids appear to be under-recorded (there are no recent records of

S. caprea × *viminalis*). These difficulties are honestly described, but what can we do as a botanical society to raise our standards so that the relatively straightforward subspecies and hybrids are well recorded? Should this not be a higher priority than recording the same areas every decade to our current standards?

Whereas the vascular plant records in the Flora draw on many different surveys, the substantial account of the bryophytes (68 pages) is largely the work of one man, Richard Fisk. The maps are based on records from 70% of the county's tetrads. To cover two vice-counties in such detail is a remarkable achievement, especially as they were very badly under-recorded before the start of the current survey. This coverage has certainly not been achieved by simply and superficially recording only the most easily identified species. Plants requiring microscopic study, such as the tuberous *Bryum* species, are conspicuously well-recorded. This bryophyte Flora will be an invaluable source of information on the habitats and frequency of mosses and liverworts in lowland England.

In the past many tetrad Floras have been simply atlases of vascular plant distributions, often lacking any historical records and with only a meagre text. The recent *Flora of Hertfordshire* (2009) by Trevor James and this Suffolk Flora, which combine tetrad maps with a detailed and original text, are encouraging signs of how the genre is developing. The dichotomy between 'tetrad' and 'traditional' Floras, never absolute, should become a thing of the past as future authors realise that a fusion of the two traditions can give a much better book than either a traditional Flora without maps or a simple atlas.

C. D. PRESTON

Flora of County Tyrone. I. McNeill, with the assistance of P. Hackney. Pp x, 374. National Museum Northern Ireland, Cultra. 2010. Paperback. £25.00. ISBN-978-1 905989-17-1.

This handsome, weighty volume redresses Robert Lloyd Praeger's negative opinion of the botanical delights of Ulster's largest county. Handsome beyond doubt, illuminated by luminous photographs of plants and landscapes (mainly by Robert Thompson, who also designed the book), and with a crisp layout and colourful dot-maps, the publisher has done Ian McNeill and his county proud. Weighty, too, topping 2 kg, with 384 generous (219 × 274 mm)

pages: this is not a flora for slipping into your backpack before you tramp through the heather and drizzle in search of new records. In fact, you need to sit at a table because the open volume is almost too unwieldy to hold. The combination of handsome design and generous bulk means Tyrone's first flora should stay at home and I have no doubt there will be many copies soon on display in the county's drawing-rooms.

I do not mean to demean this book by implying somehow it is a “coffee-table” flora, for it is presents a very solid and thorough piece of work. It is a county flora of the best kind, based on carefully documented and meticulously mapped records. Its origin goes back, in the context of the author and his family, to half past ten on a night in July 1980 when David McNeill, then a teenager, spotted an orchid in a marshy cutting on a disused railway, the first time this particular species had been recorded in Tyrone. “The exceptional beauty of the marsh helleborine flower ... confirmed for us the thrill and excitement that can come from botanical exploration, and led to 25 years and more of field recording.” That story also points to a charming aspect of this book: it is a rather personal one and Ian McNeill has no qualms about whimsy or fancy-free phytogeography. You do not often read in a flora that a species may have arrived by bus from Belfast, or the instruction: “Thread them on a stalk of grass, and, when you have accumulated a good number, offer them to your beloved ...”. I get the impression that Ian and his two sons thoroughly enjoyed themselves in the field, utterly confident that their domestic arrangements were flawless: “a hot meal on the table [would always] welcome the weary botanists home.”

The flora of County Tyrone commences with a long chapter on the topography and botany — a carefully charted meander through the valleys and over bogs, farmland and hills, with the highlights of the prime sites listed. It is a thoroughly Praeger-esque chapter, redolent of *The botanist in Ireland* (which contains only two meagre pages about Tyrone). There are chapters on geology (by Philip Doughty) and climate (by Nicholas Betts) and a lengthy gazetteer of place-names (including for bewildered outsiders some hints on pronunciation). The floristic part is arranged according to “Stace 1997”, so the most recent nomenclatural earthquakes, especially among orchids, have been sidestepped. There are no plant descriptions. Each species’s status is indicated and its local ecology summarized. Habitat records follow, often divided into “old” and “recent”, and the distribution maps, based

on 5 × 5 km squares, also have colour-dated dots.

I have two trifling cavils about the praiseworthy flora: very few of the superb photographs of plants are dated and localized (were they not taken in the county?), and the naturalists active before 1900 get almost no mention. Regarding the latter point, Edmund Murphy and Theobald Jones, who together discovered cloudberry (*Rubus chamaemorus*), Tyrone’s botanical enigma, on the Sperrin Mountains in 1826, are noticed, but not Robert Brown, “*Princeps botanicorum*”, one of the greatest botanists of the nineteenth century. He marched (literally, with his regiment) through Tyrone on more than one occasion, and in his diary on 21 July 1800 recorded water lobelia (*Lobelia dortmanna*) at Baronscourt Lough and, on 22 July, pale butterwort (*Pinguicula lusitanica*) close to Strabane. Of lesser significance perhaps, Dr James Shuter observed moonwort (*Botrychium lunaria*) at Dungannon according to a list of Irish plants published in 1807 and 1808 by James Townsend Mackay. Incidentally, all these plants are portrayed in this new flora: exceptionally, the lobelia, photographed by Ronnie Irvine (p. [59]), and a cloudberry leaf, photographed by David Holyoak (p. 203), have both dates and localities.

Reading Ian McNeill’s book was a “trip down memory lane” for me. Many of the places are familiar from my childhood—their names trip off my tongue. I remember Dr George Gillespie as a stalwart of Fermanagh (not Tyrone) Field Club: he gets much credit for ensuring the survival of botanical records from the pre-1940s.

The B.S.B.I. supported the publication of *The flora of County Tyrone* and I commend this friendly, family-made book to all members, no matter where you live. It’ll provide excellent browsing and, who knows, you too might get the urge to “add 30 new plants” to Omagh’s “square” or to wander off into the “curiously negative” Sperrins in search of cloudberry. A curious fact: Jones and Murphy reported that the cloudberry was in bloom in 1826, but no one has seen flowers on this most inscrutable plant since then.

CHARLES NELSON

Flowers of the Norfolk Broads. S. Harrap. Pp 80. Norfolk Nature Guides. 2010. Paperback. £8.99. ISBN 978-0-9558579-1-1.

There is a big problem for those that are not professional botanists or serious amateurs, who want to identify wild plants. The floras are highly technical, lack illustrations and are expensive and heavy and the popular books of illustrations are often good but the illustration and the real plant often differ a bit, the keys are usually incomplete and not everything is figured, so one can be never entirely sure of an identification. For perhaps a large group of people who simply want to know the names of the more obvious flowers even the latter alternative may be off-putting, and it is this group that we need as allies to win the current conservation battle. One solution is a small, inexpensive book of good photographs targeted at a specific habitat or area.

This is what Simon Harrap, an independent naturalist and photographer in Norfolk has done for the more prominent flowers of the Norfolk Broads. He has concentrated on fen flowers, though he also includes some of the more prominent aquatics, and has not spurned *Phragmites*, *Typha*, *Cladium*, *Schoenoplectus*

and *Sparganium*. About a hundred species are illustrated by good photographs and notes on particular characters; for the most part, accurate identification will be possible. There are some problems. A few photographs do not show enough detail (some ferns and umbellifers, for example), there is no key, and several hundred other species that occur in the area will remain a mystery. A few species have been eclectically included, though the average visitor will not see them (*Luronium natans*, *Liparis loeselii*, *Utricularia intermedia*). But for the most part this is a wise selection and a casual visitor to one of the Broadland boardwalks or nature trails in summer will be rewarded with at least a dozen names (either common or scientific) in an afternoon. That is enough to give confidence to go further. The book also gives a very brief history of the Broads, their habitats and problems, as background. No doubt the book will be on sale in local outlets, but could be of value in alkaline wetlands elsewhere. You can buy it through a website (www.norfolknature.co.uk).

BRIAN MOSS

