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1

INTRODUCTION

Arthur Mee gave a vivid description of the county's curious shape in *The King's England* (1939): "Looked at on the map Berkshire resembles a badly battered boot. Pointing east, the tow prods Surrey and Buckinghamshire. The sole treads heavily on Hampshire, the heel digs into Wiltshire, Oxfordshire lies along the uppers and Gloucestershire hangs on uncertainly like a tag". Pevsner (1966), too, had a wonderful phrase for it: he called Berkshire "half Home County, half West Country". These days, the county is more likely to be defined in peoples' minds by its two main roads: the M4 from Maidenhead to Hungerford and the A34 from Newbury to Oxford.

Berkshire used to be much larger than it is today. It still is roughly 80km along its east-west axis from Hungerford to Old Windsor, but it used to be 50km on its longest north-south axis (from Newbury to Oxford). It is just 15km wide on its shortest north-south axis (from Stanford End to Reading). Local Government reorganisation in 1972 under the Conservatives lost Abingdon, Faringdon, Wantage and Wallingford to Oxfordshire – Mercia's belated triumph. It robbed Berkshire of its county symbol (the famous White Horse, cut into the chalk of the downs above Uffington), along with much of its botanical diversity (e.g. the fen at Cothill, the sandy heaths at Frilford and the beautiful woods at Wytham). Hampshire now administers some of the most interesting habitats on the southern boundary of v.c.22 (e.g. Benyon's Inclosure, Aldermaston Soke and the northern half of the Roman Walls at *Calleva Atrebatum* near Silchester). But botanists are not deterred by these heartless acts of petty bureaucrats. Our vice-county survives intact and includes all of modern Oxfordshire that lies to the south of the River Thames. Equally, we are not persuaded that urban areas like Slough and Eton really deserve a place in Berkshire, despite their modern designations; it is somehow unseemly that anywhere north of the Thames should be included. Since the Banham Commission (1994), the county has been administered as five unitary authorities: Newbury, Reading, Wokingham, Bracknell Forest, Windsor and Maidenhead, and Slough (which, until 1972, along with Eton, was part of Buckinghamshire). All of this draws attention to the great virtue of the vice county recording system, in that the boundaries are absolutely fixed (see J.E. Dandy, 1969, *Watsonian Vice Counties of Great Britain*).

Berkshire is completely landlocked, and lies upstream from the uppermost tidal reaches of the River Thames. It is bordered to the north by Oxfordshire and Buckinghamshire, to the south by Surrey and Hampshire and to the west by Wiltshire and Gloucestershire. It is close to Middlesex in the east, but shares no boundary with it, because Surrey occupies the south bank of the River Thames from Runnymede down to Staines, where the River Colne enters the Thames. The area of v.c.22 occupies the valleys of the middle Thames and its southern tributaries, the Kennet and the Ock. The eastern end of the county is underlain largely by the river gravels and terraces of the Thames, and there are stretches of infertile, often forested, land, including Windsor Forest. The central parts of the county are on clay and support arable agriculture. The western part of the county is crossed by chalk downland, which reaches a height of 297m at Inkpen Beacon; this chalky land was formerly a vast sheep-run, but is now mostly arable. The Thames cut through these chalk downs at Goring Gap between Streatley and Pangbourne in an audacious example of river capture.

The borders of v.c.22

The northern boundary of Old Berkshire (v.c.22) follows the centre of the River Thames downstream all the way from Lechlade in Gloucestershire (v.c.33) to Runnymede, just east of Old Windsor, on the threshold of Middlesex (v.c.21). This northern border runs past Stanlake in Oxfordshire (v.c.23), around the Northern Loop past Wytham Wood, through the centre of Oxford, past Abingdon, Wallingford, Goring (Oxfordshire), Pangbourne, Reading, Henley (Oxfordshire), Marlow (Buckinghamshire, v.c.24), Cookham, Maidenhead and Windsor. For arcane reasons that have to do with the administration of Victorian Oxford but nothing to do with common sense, the boundary of old Berkshire deviated southwards from Wytham to follow the Seacourt Stream rather than the River Thames. I have ignored this aberration, and assume that the vice county boundary runs down the middle of the River Thames for its entire length from Lechlade to Old Windsor. Thus, I contend that Godstow Abbey [483091], Binsey [495077] and New Botley [500063] are in v.c.22 Berkshire rather than v.c.23 Oxfordshire.

At the eastern end of the county, the border with Surrey (v.c.17) cuts across Windsor Great Park from Old Windsor to Sunningdale, then runs parallel with the northern edge of the A30 to Camberley. This eastern border cuts Virginia Water in two: thus, Saville Gardens, most of Valley Gardens, The Totem Pole, the Obelisk, the eastern part of Smith's Lawn, Bishopsgate House, the ruins of Leptis Magna, Fort Belvedere and the waterfall behind the Wheatsheaf are all in Surrey, while

Beaumont, Cooke's Hill, Royal Lodge, Cumberland Lodge, Great Meadow Pond, Breakheart Hill, Johnson's Pond, the western parts of Valley Gardens, Frostfarm Plantation on the southern shore of Virginia Water and Blacknest Gate are all in Berkshire. The border cuts between Fort Belvedere (Surrey) and Coworth Park (Berkshire) into Sunningdale, where station and the level crossing are in Surrey. The boundary stream crosses Charters Road just south of Agatha Christie's house ('Styles'), and follows the stream as it winds through Old Windsor Bog, until it intersects the straight Roman Road known as The Devil's Highway. The border then runs parallel with the A30, behind the once-famous nurseries (now garden centres) and Windlesham Hall. It crosses the B3020 just south of the end of Coronation Road (note the change in colour of the tarmac; Surrey roads are well looked after, Berkshire roads are not), then runs just south of the A322/A332 roundabout at The Orangery, north of Bagshot Park, home of Prince Edward, and across Bagshot Heath to Wishmoor Cross at the foot of Deer Rock Hill (which is in Surrey). From here, it follows the Wishmoor Stream south-westwards. This is an important section of the boundary, because the great rarity *Dryopteris cristata* used to be found only on the Surrey side of the stream, but it now grows on the Berkshire side as well [879631]. From Wishmoor Bottom the boundary cuts through the grounds of the Royal Military Academy, Sandhurst, north of Camberley, so that Upper Lake is entirely in Surrey, but the northern half of Lower Lake and the main RMA buildings are in Berkshire. The border emerges at the A30/A321 roundabout close to Blackwater Station. From here, the boundary follows the River Blackwater westwards, with excellent water meadows on its Berkshire banks. The border runs through Trilakes Country Park at Yateley and passes south of Finchampstead Ridges. From the point where the Blackwater joins the River Loddon, the border is with Hampshire (v.c.12). It runs almost due west, passing just north of the Duke of Wellington's Stratfield Saye and through *Calleva Atrebatum* (the Roman capital at Silchester) which is part of modern Hampshire. All the way across 10km square [66] the vice county boundary is almost straight, following the line of the old Roman road known as The Devil's Highway. This runs east-west at a northing of about 625, through the suburban delights of Pamber Heath, then across Tadley Common. From here the border continues south of the main road, through the built-up part of Heath End to The Hurst Community School [573624] before turning north-westwards past The Pineapple Inn to Brimpton Common. Beyond Brimpton, the boundary drops down to the south of Inwood Copse, then follows the line of the River Enborne south of Greenham Common and Newbury. Just west of Holtwood, the border leaves the River Enborne [413638] and takes off south-westwards to the orchid hot-spot of West Woodhay Down. Historically, the next part has always been the most complicated section of the Berkshire border. The Hampshire/Wiltshire/Berkshire boundary has been very fluid, and there have been numerous revisions: Hungerford is in Berkshire, but Shalbourne and Ham are in Wiltshire. Gibbet Hill and Walbury Camp on the crest of the Downs are in Berkshire, despite these hills being called the Hampshire Downs. The current Berkshire boundary loops southwards to take in the village of Combe but this is not in v.c.22 (the civil parish of Combe (896ha) was transferred from Hampshire to Berkshire in 1895). The boundary runs along the chalk ridge from Walbury Camp (the highest point in the county), past Combe Gibbet and along Inkpen Hill to a point just west of the beautiful hanging woods of Rivar Copse [349619]. From here the border drops northwards onto the plain at Lower Spray Farm, then turns to run westwards to the north of Ham and Shalbourne. The next part of the border is important because the great local rarity *Scrophularia umbrosa* grows on the banks of the stream that forms the county boundary (thus, a single population provides county records for both Wiltshire and Berkshire). The stream runs from the watercress beds in Shalbourne, past the point where the A338 crosses the Shalbourne Stream, then past Eastcourt and Upper Slope End to Standen Manor. There is a curious carbuncle on the south-western extremity of v.c.22, so that the parkland of Bagshot is in v.c.22 but the lands of Standen Manor, only 1km further north, are not. From Jethro Tull's Prosperous Home Farm, the modern Wiltshire county boundary runs north-westwards to Froxfield, but the v.c.22 boundary runs north, following the stream from Eastcourt to Hungerford. It then follows the River Kennet westwards before turning north again [326701] between Chilton Lodge (in Berkshire) and the delightful village of Chilton Foliat (in Wiltshire). The border now runs approximately northwards all the way to Lechlade in East Gloucestershire (v.c.33), with the vice county of North Wiltshire (v.c.7) to the west. Thus, Membury Services at the summit of the M4 motorway are in Berkshire, Baydon is in Wiltshire, Ashbury is in Berkshire, Highworth is in Wiltshire and Coleshill is in Berkshire. This completes the circuit.

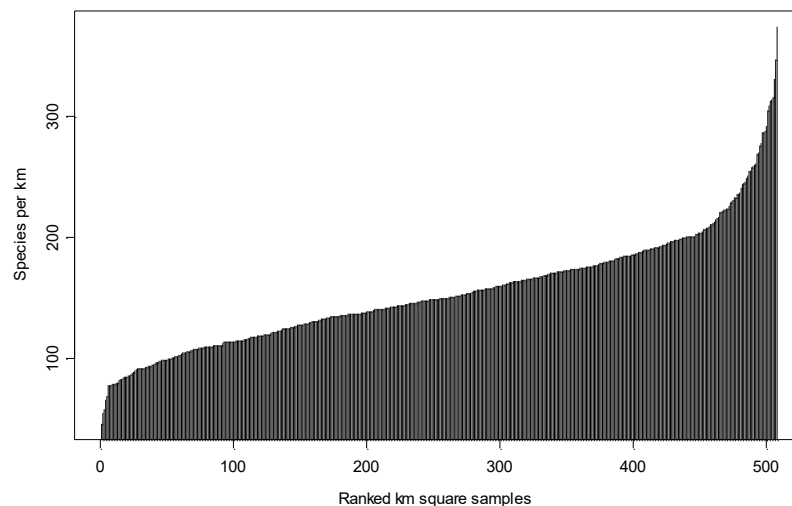
Why are there no dot-distribution maps?

If a modern county flora is a collection of dot-distribution maps, then this is definitely a post-modern flora. The space saved by leaving out the maps has been given over to explaining more precisely where and when the species were found, and to including more information about their ecology along with guidance on their identification. The reason for excluding fine-scale dot-distribution maps is entirely pragmatic. Under-recording is such an important and all-pervasive problem that I simply do not believe that small-scale maps show anything interesting. Of course, I have nothing against dot-distribution maps in principle. Much of the field work for this flora was undertaken as part of the Botanical Society of the British Isles *Atlas 2000* millennium project, which in due course became Preston, Pearman & Dines' magnificent *New Atlas of the British and Irish Flora* (2002, Oxford University Press). This 10km-square-based project was at exactly the right spatial scale for dot-distribution mapping, because (at least for non-critical taxa) the problems of under-recording are so much less severe and the patterns that show up tend to have real (and usually interesting) ecological causes like geology, soil type, altitude, rainfall, human influence, and so on. A few of these 10km-square maps have been included here to show Berkshire plants like *Pulsatilla vulgaris*, *Agrostis curtisii* and *Umbilicus rupestris* that have particularly interesting British distributions (p. 13). Again, the production of modern map-based county floras has served the excellent purpose of getting people out into the field to record formerly un-botanised places and in acting as a focus for local field work. The truth is, however, that most of the small-scale maps in most modern county floras are a complete waste of space. For the commonest species, they are a waste because the plants actually occur in every square, so the maps ought to be solid black. That they are *not* solid black, typically indicates under-recording, rather than genuine absence. White space on a dot-distribution map is inevitably a problem. Since you can not prove a negative, it is asking a lot for readers to believe that the absence of a dot really means that the species does not grow there. Absence of evidence is not evidence of absence. For the rarest species the maps are a waste of space as well,

because all of the information about a single dot could have been given more precisely, as well as more compactly and much more usefully, by providing its 6-figure grid reference. For species of intermediate frequency, the maps are often redundant. For example, the map of one chalk grassland plant like *Hippocrepis comosa* will be essentially the same as that of another chalk grassland specialist like *Polygala calcarea*. Naturally, it is interesting and important to have a map showing the distribution and abundance of chalk grassland within a county, but it is quite unnecessary to have separate maps for every single chalk grassland species. A major problem with maps of critical taxa like roses, brambles or hawkweeds is that they tend only to show where the few experts who can identify them live, or where they have spent their summer holidays. For short-lived, ephemeral species (especially for casual alien species), the maps show the coincidence of two rare events: the flowering of the plant and the presence at that particular moment and at that precise location of a botanist capable of identifying it. Casual species are therefore much more widespread than small-scale maps suggest, but we have no way of knowing how much more widespread. And, crucially, dot-distribution maps do not show exactly *when* each record was made, so that if a species is declining rapidly, its map will give a false sense of security.

Under-recording

To see the extent of under-recording, you need only look at the profile of species richness for the 508 1km squares that make up East Berkshire:



There are some genuinely species-poor squares with fewer than 100 species, and most of these are on arable land or under pine plantations. The majority of 1km squares in East Berkshire have between 100 and 250 species, but there are a few relatively species-rich squares (up to a maximum of 374 species at Crazies Hill [7980] near Wargrave). The overall average is 155 species per 1km square.

But now consider the four 1km squares that include Silwood Park [9469], [9369], [9368] and [9468], in a botanically unremarkable corner of south-eastern Berkshire. These have 365, 366, 380 and 522 species respectively (average = 408). It is inconceivable that the four squares making up Silwood Park genuinely are amongst the five most species-rich squares in the whole of East Berkshire. Their extraordinary species richness is attributable simply to the exceptionally high level of recording effort to which they have been subjected over the last 25 years.

So if increased recording effort alone can increase the average species richness per 1km square from 155 to 408 (a more than 2.6-fold increase) then surely mapping the under-recorded squares makes very little sense. Most of the apparent absences in most of the maps would be nothing more than errors of omission. Species get missed in botanical survey work for all sorts of different reasons. They might grow on private land which can not be surveyed, they might grow particularly early or late in the year when botanists are otherwise engaged, they might grow only in certain years (casual species), they could be inconspicuous, or hard to tell from common species, or the recorder might have their own personal 'blind spot' for them, or might simply be plain unlucky in not finding them. Under-recording is possible at any spatial scale, but the extent of under-recording is likely to be greatest at the largest spatial scale that is visited only once during a surveying project. This is because species lists for larger scales involve accumulation of records across a number of 1km squares, so species are progressively less likely to be overlooked as counts are based on larger and larger numbers of independent visits.

As a check on the level of under-recording in the *Flora of Berkshire*, species counts at 1km² were compared with those other local floras that have been recorded at this small scale (i.e. *Breckland* (Trist, 1979), *North East Essex* (Tarpey & Heath, 1990), *Christchurch* (Woodhead, 1994) and *Ashdown Forest* (Rich *et al.*, 1996). Overall, the Berkshire figures for median species richness per 1km² are in line with the other floras. Even though the area of East Berkshire was not chosen because it was

particularly species-rich (unlike Breckland or Ashdown Forest), the maximum species counts are higher than any of them.

Flora	Mean species richness per 1km square	Maximum species richness per 1km square	Number of 1km squares surveyed
North-east Essex	130	399	1313
East Berkshire	151	518	511
Breckland	193	310	300
Christchurch	135	270	122
Ashdown Forest	258	335	72

This evidence suggests that under-recording was lowest in Ashdown Forest. This is not surprising, given that Tim Rich and his team went to great pains to minimise under-recording in that study. There is the hint of a positive relationship between total area surveyed and the degree of under-recording, but under-recording was not systematically worse in East Berkshire than in the remaining 3 studies, especially bearing in mind that some areas of East Berkshire do have genuinely low species richness at the scale of 1km². My decision, therefore, was to do away with small-scale dot distribution maps altogether for the printed version, but you can find a selection of more interesting distribution maps on the web site.

Instead, I took the approach of studying the flora at a range of different spatial scales. This allows me to give detailed ecological information for the commonest species and to give precise details of all the sites at which uncommon species grow (or once grew). The policy adopted is one of complete disclosure. I do not consider that the location of a plant species can be privileged information. The secrecy of the past was intended to protect rare and vulnerable plants from unscrupulous collectors and to protect landowners from trespass by irritating botanists. But in truth, it was the unscrupulous collectors who made it their business to find out all of the ‘secret’ locations and to destroy many of them.

The real threat to rare plants these days comes not from knowledge but from ignorance. A plant is much more likely to be killed as a result of habitat destruction or inappropriate management than by botanical collectors. The person who authorised destruction of the site was, in all probability, totally unaware of the presence of a special plant at the site. If they had known of the plant’s whereabouts, then an effort could have been made to avoid harming it. Needless to say, the naming of a location of a plant in this flora does not imply that the site has public access. It is ironic, however, but such has been the level of destruction and despoliation of natural habits in Berkshire, that most of our uncommon wildflowers are now restricted to nature reserves, and so it is easy for the public to see them. This is a highly regrettable state of affairs, and not something of which we should be at all proud.

Botanical Divisions

Many of the older floras divided up their county into sub-areas that, ostensibly, were studied with equal intensity. For instance, Druce’s *Flora of Berkshire* (1897) split the vice-county into five regions by river catchments - Isis, Ock, Pang, Kennet and Loddon. The present flora takes a different tack by studying the flora at different spatial scales with different intensities. This is an open admission that an area of 1,822km² can not be studied with uniformly high intensity by one person. Instead, the 1.1km² of Silwood Park was studied at a scale of 100m squares (hectares = 0.01km²) on an essentially daily basis for 25 years (1979-2004). This area is nested within the 48km² of Ascot, which was studied at a scale of 500m squares over the same period of years but far less intensively (not least because so much of the area is occupied by large private estates that are jealously guarded, often by armed security personnel). This, in turn, is part of the 512km² of East Berkshire, which was studied systematically at a spatial scale of 1km squares from 1996-2004; every 1km square was visited, but many of the squares were visited only once. The remaining 1,310km² of the vice county, here called West Berkshire, were studied at the scale of 5km squares (25km²) by an *ad hoc* series of visits from 1997-2004. Analysis of the species-richness data at these different scales is described in Crawley & Harral (2001).

What does ubiquitous mean?

The meaning of “ubiquitous” depends on the scale at which you are looking. For instance, 183 species were found in all of Berkshire’s 10km squares, but only 78 were found in all 5km squares. For East Berkshire, 47 species were found in all 2km squares, but only 28 were in all 1km squares. Within Silwood Park, 49 species were ubiquitous in 9ha squares, but no species occurred in all 110 of the 1ha plots (although 5 taxa – *Quercus robur*, *Rubus fruticosus*, *Acer pseudoplatanus*, *Holcus mollis* and *Ranunculus repens* – came close, and were found in more than 100 of the 1ha plots). Note, too, that the identity of ubiquitous species is itself scale-dependent. For instance, the only two species that are close-to-ubiquitous in 10km squares for Britain as a whole are *Plantago lanceolata* and *Bellis perennis* (Preston, Pearman and Dines, 2002), but these were not in the top 5 most frequent species at a scale of 1ha within Silwood Park.

Small-scale frequency profiles

The flora of Silwood Park has been analyzed at a range of smaller spatial scales from 1ha down to 0.01m² (from 100m squares to 10cm squares; Crawley and Harral, 2001). As far as I know, this is a novel feature of the present flora. The profiles of

frequency from these data provide a fingerprint of the ecology of the different plant species. No two species, even the very commonest, show the same frequency profiles. The idea is to give more insight into the small-scale distribution of the commoner species, because these plants inevitably appear to be ubiquitous at scales of 1km² or greater. It turns out that many of these apparently ubiquitous plants have relatively low frequencies at smaller spatial scales. Here, for instance, are the frequency data (% of squares of different sizes including the species) within Silwood Park for two of the commoner grasses, *Agrostis capillaris* and *Dactylis glomerata*, both of which are ubiquitous in 1km or larger squares. This is the profile for *Agrostis capillaris*:

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
55	61	59	68	90

It shows high frequency (55%) even at the smallest spatial scale because it occurs in such a wide range of ecological communities (grasslands, waste ground, woodland clearings, and so on). It was found in 90% of the 1 hectare grids (the largest scale at which Silwood Park was surveyed; 1ha = 100m by 100m). But even in a randomly positioned square measuring 1m by 1m, there was still a better than 50:50 chance of finding *A. capillaris*. In contrast, *Dactylis glomerata* shows a quite different frequency profile within Silwood Park:

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
3	5	15	28	49

It is less frequent in 1ha squares (49%) than *Agrostis* was in 1m squares (55%). The difference is explained by the fact that the habitat range of *Dactylis* is so much more limited (it is restricted to sunny grasslands on dry soils), and because it suffers much more from rabbit grazing than does *Agrostis*. Comparison of the frequency profiles shows that *Agrostis* had roughly double the frequency of *Dactylis* at the scale of hectares (90% compared with 49%), but more than 18 times the frequency at the scale of 1m squares.

One of the great advantages of long-term study at small scales is that one can begin to estimate rates of turnover of species. For example, how often does small-scale local extinction occur for plants of different life histories? What is the average residence time of local populations of casual plant species? At what rate do new species, both native and alien, become established? The Silwood Park part of the study, from October 1979 to October 2004, allows a first stab at estimating these rates. Of course, the rates would have been different if we had estimated them somewhere else. Likewise, they would have been different if we had estimated them over a different 25-year period. But they do give, for the first time, some feel for the magnitude of species turnover rates at scales smaller than 1km².

Conventions

This flora contains some unusual conventions. Square brackets [] are used to show grid references; eastings first, then northings. Two figures, [67], refer to 10km squares (hectads). Four figures [6372] show 1km squares (in this case, 63 km east and 72 km north of the south-west corner of the relevant 100km square). Six figures (formerly the most accurate grid references) refer to hectares; thus [638721] is an area of 100m x 100m whose south-west corner is 63.8 km east and 72.1 km north of the south-west corner of the 100km square. The most recent records (post-1998) are based on the use of geographical positioning systems (GPS) that take data from satellites to produce eight-figure grid references that refer to 10m squares. For ease of reading, the eastings and northings are separated by a blank space [6384 7213]. In some cases with the very rarest, most endangered species, a ten-figure grid reference is given; in theory, this is to the nearest 1m [63844 72135] but note that this is substantially more precise than current non-military satellite GPS can genuinely resolve.

In most cases, grid references are not given for well-known place names in East Berkshire; the names with their four-figure grid references appear just once in the Gazetteer on p. 1341. Place names within Silwood Park, with their six-figure grid references appear in the second part of the Gazetteer. For West Berkshire, the 10km square is given for common species, 1km squares for occasional species, and six-figure grid references for modern records of uncommon or rare species. We are fortunate in Berkshire that the county does not span a greater number of 100km squares, since this means that for practical purposes we can omit the name of the 100km squares from grid references, thus saving considerable space. All of Berkshire's 10km squares are in 100km square SU, except for the two northernmost squares, SP40 and SP50. We follow the convention that lists of locations are given row-wise within columns (i.e. with northings changing within eastings), with the sequence of columns changing from west to east. Thus, SP40 lies immediately north of SU49 and SP50 lies immediately north of SU59, so a list of sites can be presented, omitting the 100km square names without ambiguity, like this: [29], [38], [46], [40], [59], [50].

Round brackets are used for dates (1949) or (2002). Periods of time are shown by omitting the century from the second date, unless the century is different: thus 1987-93, but 1987-2002. Unless stated otherwise, "Druce" means Druce (1897) and "Bowen" means Bowen (1968). The abbreviation "det." means "determined by", and is used where expert opinion on an identification has been provided. Herbariums with Berkshire specimens are shown in bold capitals within round brackets, using the following abbreviations:

Abbreviation	Herbarium
BIRM	University of Birmingham
BM	Natural History Museum, South Kensington; "British Museum"
CGE	Cambridge University Botany Department
E	Royal Botanic Garden Edinburgh
K	Royal Botanic Garden Kew
LAN	University of Lancaster
LIV	University of Liverpool
NMW	National Museum of Wales
OXF	Oxford University Botany Department
RNG	Reading University Botany Department
RGD	Reading Museum
SLBI	South London Botanical Institute

Lists of species are usually given in taxonomic sequence rather than in alphabetical order, on the assumption that this gives greater biological insight (so ferns come first and orchids come last).

Illustrations

Vascular Plants. It may seem a curious recommendation, but the best picture book by far for Berkshire plants is *Flora Helvetica* by Lauber and Wagner (1996, Verlag Paul Haupt, Bern). It contains a comprehensive set of colour photographs of outstanding quality, composition and depth of focus. It covers grasses and sedges as well as flowering plants and ferns. For painted images, the best source is Blamey and Grey-Wilson *The Illustrated Flora of Britain and Northern Europe* (2003, Cassell, London). There is no better source of critical line drawings than Stella Ross-Craig's *Drawings of British Plants* (1948-1974, Bell and Hyman, London), supplemented with Jermy and Tutin's *British Sedges* (1968, BSBI, London) and Hubbard's *Grasses* (1984, Penguin Books, London). But for comprehensiveness combined with portability, there is simply nothing to beat *Volume 3* of Rothmaler's *Exkursionsflora von Deutschland* (1959, Spektrum Akademischer Verlag Heidelberg, Berlin). This extraordinary little book has clear, detailed line drawings of more than 2,800 species on its 723 plates, including virtually all of Berkshire's grasses, sedges, ferns and flowering plants. Only the German names are in German: the pictures are in English and the Latin names are in Latin.

Fungi. Roger Phillips' *Mushrooms and other fungi of Great Britain and Europe* (1981, Pan Books, London) is outstanding, and many of the photographs are of Berkshire specimens. Michael Jordan's *The Encyclopedia of Fungi of Britain and Europe* (1995, David and Charles, Newton Abbot) is also very good.

Lichens. There is a wonderful new book with exquisite colour photographs of almost all of Berkshire's lichens: I.M. Brodo *et al.*, *Lichens of North America* (2001, Yale University Press, New Haven).

Bryophytes. Line drawings are what you need for identifying these tiny plants: A.J.E. Smith's two books *The Moss Flora of Britain and Ireland* (1978, Cambridge University Press, Cambridge) and *The Liverworts of Britain and Ireland* (1990, Cambridge University Press, Cambridge) are essential references. A few of the images in Roger Phillips' *Grasses, Ferns, Mosses and Lichens* are useful, but most of them lack the necessary detail.

And more.....