

BERKSHIRE AXIOPHYTES

V.C. 22

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Equisetum variegatum Schleich. ex F. Weber and D. Mohr *Variegated Horsetail*

grh 5

A local speciality of calcareous springs, here growing a long way from its native stronghold in South Wales, and more than 100km away from any other sites. A winter-green plant with slender, perennial shoots on which last year's cones persist. The cones are apiculate (not rounded) at the apex. The teeth of the leaf sheaths have broad scarious margins, which are much wider than the black centres, giving the whole shoot a characteristic black-and-white striped appearance at each node. The stems are short (less than 20cm), and emerge from the water (or the moss) at a shallow angle (closer to prostrate than erect).

West Berks: "locally abundant on wet limestone in Cothill pit" [49] (**OXF**). First recorded by E.G. Arthurs and E.F. Warburg in 1959. This is one of the species singled out for mention in the SSSI declaration for Dry Sandford Pit (= Cothill pit). Still there on 24 November 2002, when it was occasional as scattered shoots in clear shallow water of calcareous springs (growing with the rare stonewort *Chara hispida*; Plate 16), and amongst marginal, lime-encrusted mosses (*Palustriella commutata*). Certainly not "locally abundant", yet found in several of the springs in full sun, but absent from shade in nearby *Phragmites* or *Schoenus nigricans* fen.

Pilularia globulifera L. *Pillwort*

hel 6 ↓

Moist spots on heaths and gravelly margins of ponds in heathy situations. Scarce: A lowland fern of silty and peaty pond margins, and shallow pans and pools resulting from brick-earth or gravel extraction. An early successional species, soon lost when overtopped by more vigorous plant species. Often found with *Apium inundatum*, *Hydrocotyle vulgaris*, *Ranunculus flammula* and *Samolus valerandi*.
NVC: M 29; OV 35

East Berks: a local speciality of the Crowthorne Lake District. First recorded from a pond near Wellington College (**OXF**, 1891). Acid ponds, abundant at South Lake [752723] in 1968 (**RDG**), but not seen since. Its only surviving stations are at Heath Lake, Crowthorne [828652] and at several spots in Moor Green Lakes [8153 6229], [8086 6250], [8092 6226], [8091 6246] and [8090 6219] on Colebrook Lakes and Grove Lake in 2001.

West Berks: no records.

Pulsatilla vulgaris Mill. *Pasqueflower*
Anemone pulsatilla L.

h 4 ↓

A local speciality of grassy chalk downs, at its southern British limit in Berkshire (see p. 13). "The Pasque Flower occurs in Berkshire over a small area, where it is by no means continuous, but is found in scattered patches, which are more frequent on the slopes than on the tops of the chalk downs" (Druce). Most colonies occur on steep south or south-west facing slopes on the escarpment of the chalk where the turf is characteristically species-rich. Threatened by scrub encroachment and poor grazing management.
NVC: CG 2,3,5

Silwood Park: a very rare casual, self-sown in gravel in the northernmost of the cold frames on the pot-standing at the Greenhouses. Three plants in flower on 21 April 2001 (**K**); still there in 2004. The origin of the seed is unknown.

East Berks: planted at Park Place, but there are no native records from the grasslands of the northern chalk.

West Berks: local and rare. First specimens from Hampstead Norreys [57] in 1865 (**OXF**), Lowbury Hill [5382] in 1889 (**OXF**), Pusey [39] in 1895 (**OXF**) and Wembury [48] in 1910 (**OXF**). Cherbury Camp [39], Ilsley Downs and Ridgeway above Lockinge [48], Aldworth downs (**LAN**) [5579], Aston Upthorpe Downs [544835] where there were 12 plants in 1988 and 26 in 2001, Blewbury Downs (**OXF**) and Moulsoford Downs [all 58]. Formerly on Unhill and Yewtree Downs [58], Streatley and Pangbourne Downs (the head-quarters of the plant in Berkshire according to Pamplin in 1854) [67]. Vulnerable to acid rain and fertilizer pollution, even in its protected sites. The Aston Upthorpe site has declined dramatically over the past 30 years, and is now in poor condition, despite the introduction of new Pasqueflowers by conservationists. On 29 May 2005 Susan Erskine counted 55 plants, of which 26 were surviving transplants and 3 were new recruits. There were still 55 plants on 23 April 2006 [547835]. It is odd that it never grew on the western chalk; for instance, Weathercock Hill above Ashdown Park [28] looks to be ideal habitat. Atlas 2000: [39], [48], [58]

Ranunculus parviflorus L. *Small-flowered Buttercup*

th 5 ↓

A scarce plant of dry arable fields, sunny banks, open disturbed ground and woodland rides on sandy soil. Found in rabbit scrapes, tracksides, flower beds, gravel paths, cliff edges, etc. often with *Cardamine hirsuta* and *Veronica*

arvensis. Exhibits great size plasticity and range of flowering dates (from April to December in particularly mild, damp years). Very local and decreasing.

East Berks: Pinkneys Green in 1919 (**RDG**) and Winter Hill in 1897. Not seen recently.

West Berks: cultivated ground in Lower Seeds and Upper Seeds at Wytham [40] (still there in 2003), Castle Hill, Sinodun Hills [59], Bagley Wood and Kennington [50], Aldermaston (**RDG**) in 1930 [56], Grazeley [66], Bradfield [67]. The best site on which to see this plant is Greenham Common, in open ground at the eastern end [516644] that had been kept free of perennial plant cover by disturbance from military vehicles (now managed to conserve rare annual plants including *Apera interrupta*). Atlas 2000: [40], [56]

Ranunculus omiophyllus Ten. *Round-leaved Crowfoot*
Ranunculus lenormandii F. Schultz
Ranunculus hederaceus L. subsp. omiophyllus (Ten.) Cout.

hel 5

A local speciality of ferruginous swamps and flooded tracks. All its leaves are laminar, and divided to less than half way. The sepals are reflexed and the achenes glabrous. Told from *R. hederaceus* by petals > 4.5mm, much longer than sepals (2-3 times). Found in sun or shade on wet mud and in shallow acid ponds and streams in heathy districts. Local and rather rare.

NVC: A 11

Ascot: one of the surviving specialities of Sunningwell Bog. A single plant on bare drying mud beneath *Salix cinerea* in the north-west corner of the Bog [927683] in May 1980; still there in 2002. On 18 May 2003 there were two good patches, each more than 1m across, in standing water next to the sunken tin bath tub, with *Carex viridula* subsp. *oedocarpa* and *Dryopteris carthusiana*. A single plant beneath birch, by the ferruginous ditch that runs through the middle of Wells Wood [932684]. North side of the railway on Whitmoor Bog [8968] in 1999. In deep tractor ruts in two places near the crossroads of the grassy tracks on Icehouse Hill close to the Lime Avenue in Swinley Park [895675] on 20 May 2003. Not in Silwood Park

East Berks: confined to acid ponds on the Bagshot sands in the south of the area. Rare and decreasing. Bagshot Heath in 1871, Blackwater below Finchampstead, ditch near Bracknell, Windsor Park, Swinley, Wokingham. Finchampstead Leas [7560], Heath Lake at Crowthorne (**RNG**) [8365], Bracknell [8565]. Locally frequent on the margins of Heath Lake in 1994. By a shallow muddy pond to the east of Wokingham [8326 6895] in April 2003. Atlas 2000: [76], [86], [97]

West Berks: no records.

Fumaria densiflora DC. *Dense-flowered Fumitory*
Fumaria micrantha Lagasca

o th 6 ↓

A local speciality. Calcareous arable land and cultivated fields, “not uncommon but rather local” in Druce’s time, while it was “local and sporadic” by Bowen’s time. Now centred on [58]. Not found recently in East Berkshire and apparently extinct in Kennet. Told from the next two species by its relatively larger flowers (at least 6mm) and sepals (at least 1.5mm), and told from the much commoner *F. officinalis* by its longer bracts (at least as long as the pedicels, often longer).

East Berks: only one record from Maidenhead (**HULL**) in 1923.

West Berks: Kintbury [36] in 1897, Crog Hill, Wantage Fair Mile (**LAN**) and Nutwood Down [38], between Beedon and East Ilsley [4879], Abingdon [49], Wootton [4701], Perborough Castle, Compton (**OXF**) [57], Aston Upthorpe, Blewbury, Aston Tirrold, Kingstanding Hill, Streatley (**RNG**) and Unhill Bottom [58], Upper Basildon [67]. Most recently from Aston Upthorpe [542832] in June 1988. Still at Weathercock Hill [297826], Britchcombe Farm, Hackpen Hill and by the Ridgeway [38], and at Streatley Warren [559808].

Fumaria parviflora Lam. *Fine-leaved Fumitory*

o th 6 ↓

A local speciality. Cultivated fields on the lower chalk, very local and sporadic. A small-flowered Fumitory as the Latin name suggests, told from *F. vaillantii* by its lighter petals (white or pale pink rather than pink) and bracts at least as long as the fruiting pedicels (not shorter).

West Berks: Lowbury Hill, Fair Mile, Aston Upthorpe Reservoir and Streatley (**LAN**) [58] with a 1897 record from Hoe Benham [46]. Most recently, a single plant was found in chalky arable ground at Aston Upthorpe reservoir [5585] in June 1988, and another on Aston Upthorpe Down [544835] in June 1992.

Fumaria vaillantii Loisel. *Few-flowered Fumitory* ○ th 6 ↓

A local speciality of calcareous arable land, gardens and disturbed ground. Local and sporadic. Told from *F. parviflora* by its darker petals and shorter bracts (*see above*).

East Berks: Pepper Lane, Reading [7070] in 1956.

West Berks: Membury [37], Seven Barrows (**OXF**) and Wantage Fair Mile (**LAN**) [38], East Ilsley, Chilton and Harwell [48], Upper Seeds Wytham [40], between Lowbury Hill and Unwell Road, Fair Mile (**OXF**), Aston Tirrold and Aston Upthorpe [58], Tilehurst and between Streatley and Pangbourne [67]. Recently from Membury [311749], above Wantage [347847], Castle Hill Fort by The Ridgeway [381841], Aston Upthorpe [545835] and Fair Mile [553826], all since 1986.

Moenchia erecta (L.) P. Gaertn., B. Mey. & Scherb. *Upright Chickweed* th 5 ↓
Sagina erecta L.

An early-flowering annual, confined to heathy commons, and dry banks on acid, nutrient-poor soils; very local and decreasing. This is a scarce species in Britain, found on open, shallow soil in dry grasslands that are seasonally parched; often with *Ornithopus perpusillus*. Declining through cessation of grazing and incursion of rank species. An annual with 4 of everything: 4 sepals, 4 entire petals, 4 stamens and 4 styles. Rather like a miniature greyish *Stellaria holostea* with flat leaves (rather than the wiry leaves of *Minuartia hybrida* or *Sagina* spp). The fat, silvery sepals give the plant a really obvious jizz, despite it being so tiny.

Ascot: known to Druce from Ascot Racecourse (1897), but not seen since.

East Berks: Green Park in Windsor Great Park (**BM**) in 1847, near the railway between Bracknell and Ascot (also on the Surrey banks of Virginia Water). Wellington College, Finchampstead Ridges (1960). Woodley (**RNG**) in 1934, College Farm Reading (**RNG**) in 1916. Bowen believed it to be extinct in all its eastern sites (east of 90), and to survive only at Finchampstead Ridges. Atlas 2000: no records.

West Berks: restricted entirely to the heaths of the Kennet valley. Greenham Common and Wickham Heath [46], Snelsmore Common [47], Bucklebury Common, Mortimer and Thatcham [56], Burghfield Common (**RNG**) and Pond Green, Padworth [66]. The best place to see the plant these days is on Greenham Common, in short (closely mowed) heath south-east of the former runway [505643]. Atlas 2000: [46], [47], [56], [57], [66]

Stellaria palustris Retz. *Marsh Stitchwort* hel 5 ↓
Stellaria dilleniana Moench, non Leers
Stellaria glauca With.

A local speciality of bogs, marshes, wet ditches and meadows, “preferring the company of other herbage” (Druce). Fens and damp, nutrient-rich pastures; frequent by the Thames. Now a distinct rarity as a result of agricultural “improvements” of water meadows. Like *S. graminea* but lacking that species ciliate bracts and outer sepals. The field jizz is easy, because *S. palustris* is a pale, greyish plant rather than a bright, lime-green one.

NVC: M 24; S 24

East Berks: moist meadows by Eton (1805, but probably in Buckinghamshire, v.c.24), ditches by the Thames at Bisham, Medmenham and Cookham, near Wellington College, meadows about Wargrave, Sonning, Coleman’s Moor, Finchampstead (**RNG**) in 1922, Great Lea Pond (**RNG**) [7168] in 1957. Near Loddon Bridge, Whitley (**LAN**) in 1956, New Bridge on the Blackwater, near Ruscombe. Eversley [760631] in 1968, Sonning [765767] in 1995, Arborfield, Remenham, Cock Marsh [881867] in 1992, with *Oenanthe fistulosa*, just to the west of Pond 1 at Cock Marsh [880868] in 2000-04.

West Berks: Cothill fen [49], Newbridge, Swinford Bridge and Wytham meadows [40], Thrupp Farm and Radley [59], Abingdon [49], Sandford Lock and Iffley [50], Cholsey and Moulsoford [58], Kintbury [36], Newbury [46], Thatcham [56], Basildon and Burghfield [67]. Extinct in Kennet valley [36] to [56] according to Bowen.

Illecebrum verticillatum L. *Coral-necklace* th 9 ↓

A late-flowering local speciality. "Found in 1891 by A.W.S. Fisher on the borders of pools and on damp sandy ground in heathy districts at the western end of Nine Mile Ride near Wellington College on Mr J. Walter's estate of Bearwood, growing with *Radiola linoides*, *Hydrocotyle*, *Ranunculus flammula*, *Drosera rotundifolia*, *Veronica scutellata* and *Juncus bulbosus* with pines and rhododendrons nearby; the occurrence of this Cornish and New Forest plant in Berkshire is of singular interest" (Druce). Acidic woodland rides and margins of acid ponds; very local and rare. This is a scarce plant in Britain, found on seasonally wet, sandy or gravelly tracks and heathy lawns on acid soils, often growing with *Gnaphalium uliginosum*.

East Berks: a wood in Finchampstead (**RNG**) [7563] in 1927, Wellington College pond (**OXF** and **RNG**) [8363] in 1891, 1910, 1914 and 1956, Crowthorne (**OXF** and **RDG**) [8463] in 1958, Kingsmere (**RNG**) [8164] in 1915 and 1948, Queens Mere (**OXF**) in 1929, California-in-England (**RNG**) [8065] in 1936, Easthampstead Park (**RNG**) [8467] in 1944 and [8667] in 1951, Heath Lake [828652] in 1961, Bracknell [8765] in 1952, lower slopes of Finchampstead Ridges [8063] in 1967. Still at Heath Lake and perhaps on the inaccessible private land at Kingsmere or Queens Mere.

West Berks: no records.

Spergularia marina (L.) Griseb. *Lesser Sea-spurrey*
Buda marina Dumort
Arenaria rubra L. var. marina L.
Spergularia salina J.S. Presl and C. Presl

th 6 † & • th 6 ↑

A local speciality, first record by Druce in 1890 from the famous saline meadow to the south of Marcham [49] (see p. 116); there were still 10 plants from a saline ditch in Marcham [454959] in 1964. Sadly, the site is now destroyed. Now confined to roadside salt adventive communities as an alien. Told from *S. rubra* by its bigger seeds (> 0.6mm) and by the fact that its stipules are fused for more than one third of their length (look at young shoots).

East Berks: now an occasional but locally abundant component of the road-salting community established along motorways and dual carriageways throughout the county. There were no roadside records from Berkshire before Atlas 2000 recording, but to judge from its current abundance it has obviously been overlooked for quite some time. Very abundant where the A33 crosses the M4 south of Reading [7168] in 1997-2004. Common in Bray Wick on the edge of the A308 [8979] and frequent on the Thames crossing at Windsor [9577] 1998-2004. <1% (1km²). Atlas 2000: [76], [87]

West Berks: on the roundabout at the junction of the A420 and the A417 [300952] in 2004. Atlas 2000: [37], [47], [49] but probably all along the M4 and the dual carriageway of the A34.

Silene gallica L. *Small-flowered Catchfly*
Silene anglica L.
Silene quinquevulnera L.

o th 6 ↓

A local speciality of sandy cornfields and gravelly waysides; very rare or extinct as a result of heavy use of herbicide and fertiliser. A scarce plant in Britain, growing as a winter-annual weed of cultivated or disturbed ground on sandy soils. Occasionally found as a casual from imported clover seed. Known from other annual champions by its hairy leaves and stems, and its short (< 12mm) calyx with long, spreading hairs. Extinct at most if not all of its former sites.

East Berks: local and rather rare. Wellington College, Wokingham (**OXF**), Remenham, Ambarrow, Finchampstead, abundant in fields near Bracknell all pre-1897. Rare and decreasing. Wokingham (1890), Finchampstead (1966), Binfield (1953). Atlas 2000: no records.

West Berks: absent from the centre of the region, with scattered records from the north-western part of the Thames valley and from the south-eastern parts of the Kennet valley. Becket Park [28] in 1982, Buckland Warren [39] in 1966, Crockham Heath [46] in 1965, Tubney [49] in 1833, Cothill [49] in 1908, Boars Hill (**OXF**) [40] in 1890, Midgham (**OXF**) [56] in 1890, Tutts Clump [57] in 1963, Mortimer [66] in 1897, Tilehurst (**RDG**) [67] in 1913. Atlas 2000: no records.

Silene conica L. *Sand Catchfly*
Pleconax conica (L.) Sourk.

th 5

A local speciality of bare places in nutrient-poor sandy grassland. Very rare and sporadic. Druce thought that it "has no claim to be considered native in Berkshire". Bowen, however, considered it to be native at Frilford where Druce had found it (**OXF**), and it is accepted as native in Atlas 2000.

NVC: U 1

Silwood Park: sown as an unintended component of a wildflower seed mixture on North Gravel, opposite the (then) brand new Southwood Halls in May 1983. First flowers seen in June 1984 in good numbers along the edge of the grass track past Immunology, when there were 5 patches, each of 10 or so plants. Thorough, repeated searches in 1985 failed to reveal any plants, and not seen since. The site was subsequently destroyed during the construction of Flowers Halls.

East Berks: no other records.

West Berks: the celebrated, allegedly native, site on Frilford Heath has many records spanning the decades following its discovery by Druce in 1913 (**RNG**, **RDG** and **OXF**). The plant fluctuates greatly in abundance from year to year (e.g. 10 in 1974, 3 in 1975 and 1 in 1981), but there are two extant patches, each a few metres square at [442974] and [448987] in 2002. Also at Hitchcopse pit [453997], Dry Sandford pit [465996], and in set-aside land nearby [447981] in 2001-04. With other aliens at Newbury [46] on garden ground near the railway in 1858. Atlas 2000: [49]

Dianthus deltoides L. *Maiden Pink*

ch 6 ↓

One of our local specialities. Old walls, sandy places, etc. “The Pink which grows by the highway sides of the sandy hill you descend going from Nottingham to Lenton, I find to be the same which grows ... in many places in Berkshire” (Ray, 1670). “Mr Tufnail tells me it is well established at Messrs. Sutton’s farm in the grassy borders, probably introduced with foreign seeds” (Druce). Known by its single (not clustered) flowers and its shortly-hairy (not glabrous) lower stems. The flowers are scentless.

Silwood Park: a rare garden escape, on the stone base of the Wishing Well in July 1983. Not seen since. Both pink and white flowered forms were locally frequent on the edge of the cinder pot-standing at The Greenhouses in June 2002.

East Berks: dry grassland on acid soils. Very local in Suttons grounds (the celebrated seed merchants) at Reading (**RDG**) in 1897, 1919 and 1979 [733737], and at Wellington College (1907) but Bowen failed to see it at either of these sites. On the fifth fairway of Sonning golf course (1965), Bearwood (**K**) [7768] in 1945. Atlas 2000: [76], [77], [86]

West Berks: Greenham golf course [46], Honey Bottom (**OXF**) and Bussock Hill House [47], Frilford Heath Golf Course on the edge of the rough [49] from 1930 to 1990, planted at Jarn Mound [40], Brimpton [56], Bucklebury [5570], Bagley Wood [5102]. Garden escapes on waste ground near the canal in Newbury [4767] in July 2002. The principal surviving populations are on Frilford Heath [443975], [447989] and [446985]. Atlas 2000: [47], [49]

Persicaria mitis (Schrank) Assenov *Tasteless Water-pepper*

th 6 ↓

Polygonum mite Schrank

Polygonum laxiflorum Weihe

Persicaria laxiflora (Weihe) Opiz

Polygonum hydropiper L. subsp. *mite* (Schrank) Munshi and Javeid

A local speciality of ditch sides, streams, ponds, cattle-poached wet grassland and damp arable fields in low-lying situations; local. Scarce on wet mud or peat, exposed in summer as the water level falls in ditches, wet hollows and cattle trampled patches, always in full sun. Much confused in the past with both *P. hydropiper* and *P. minor*, but distinguished as follows: (1) lacks the sharp taste of *P. hydropiper*; (2) bristles at the tips of stipules > 3mm; (3) brownish or yellowish glands lacking or very sparse on the perianth and peduncle; (4) leaves less than 5 times as long as wide; (5) large achene 2.5-3.5mm (*P. minor* has achenes 2-2.5mm); (6) erect (not drooping) inflorescence.

East Berks: Swinfield, Bulmarsh, Bray, Wargrave, Aston, Riseley, Whitley Green. Ruscombe Lake (1959), Warfield (1963), Queens Eyot [912784] (1988), Cock Marsh (2000-04). Rare in the Thames valley, absent to the south of 70. <1% (1km²). Atlas 2000: [88], [97]

West Berks: rare in the Northern Loop, extinct at many of its southern sites, and absent from all of the interior. Sandleford [46], Cothill [49], Newbridge, Harts Weir, Northmoor Loch, Swinford and Wytham [40], Thrupp and Barton Court [59], South Hinksey [50]. Atlas 2000: [40], [50]

Persicaria minor (Huds.) Opiz *Small Water-pepper*

th 8 ↓

Polygonum minus Hudson

Wet meadows and marshy ground, margins of ponds and ditches; local and rare. Bowen considered the species to be extinct in Berkshire but it has been re-found at Cock Marsh. It often grows with both *P. hydropiper*, *P. maculata* and *P. mitis* (see above) along with *Bidens cernua* and *B. tripartita*. Slightly more acidic and higher nitrogen preferences.

Declined with the loss of farm ponds and greater reduction of summer water levels. Told from *P. mitis* by its longer (more than 5 times as long as wide) and narrower leaves (2-15mm wide) and by its smaller achenes (2-2.5mm).

Ascot: first record Sunninghill (**BM**) by Sir Joseph Banks in 1773.

East Berks: Riseley (1897), Coleman's Moor (1897), Hurst (1918), Whistley Green, Loddon Bridge (1897). Cock Marsh [880867] (1982-2004), so still worth looking for. <1% (1km²). Atlas 2000: [88]

West Berks: extinct. Formerly at South Hinksey [50] in 1860, Wytham meads [40] in 1897, Abingdon [59] in 1918 and 1943. Atlas 2000: no records.

Elatine hexandra (Lapierre) DC. *Six-stamened Waterwort*
Tillaea hexandra Lapierre

hel 7 ↓

A local speciality of pond margins in very shallow nutrient-poor water, local and very rare. Scarce: an ephemeral on exposed wet mud or a full aquatic looking like *Callitriche* in the vegetative state. Grows with *Juncus bulbosus* on peaty sites and with *Littorella uniflora* on sandy sites. An annual, fluctuating widely in abundance. It can flower even when submerged.

NVC: A 22

East Berks: "Occurs in Virginia Water, near The Cascade, but this portion of the Lake is in Surrey; so far (1897) I have been unable to find it in the Berkshire part" (Druce). C.P. Petch found the plant on the Berkshire side of Virginia Water in 1946. It also occurs in Lower Lake in Sandhurst (**OXF**) in both sides of the Surrey / Berkshire border. It was in another pond, but nearly choked with *Littorella*, near Wellington College (**OXF**). Bowen considered the plant extinct at these 3 stations, but it was still present in the Surrey part of the pond in the Staff College Grounds in Camberley in 1952 (Lousley, 1976) and in 2002. Recent records include Heath Lake, Crowthorne [828652] in 1979 and 1987, and from gravel pits close to the Hampshire border by Yateley Bridge [828613] in 1977 (**OXF**) and [811623] in 1991. Common across the Hampshire border in lakes all over Bramshill Common [7560] and [7562]. Widespread in flooded gravel pits in the Blackwater Valley at Moor Green Lakes in 2000-03, especially in open habitats around the north and east margins of Grove Lake [8062]. Atlas 2000: [86]

West Berks: no records.

Hypericum montanum L. *Pale St John's-wort*

hp 6 ↓

A local speciality, almost confined to the woods on the chalk. "In ye pits about the middle of Earley field and in ye land on ye right hand side of Loddon Bridge 3 miles from Reding" (Ray, 1680). A nationally scarce plant of warm, well drained soils on chalk on roadside banks, scrub, open ash woodlands, or in coarse grassland dominated by *Festuca ovina* and *Helictotrichon pratense*. Distinguished from *H. hirsutum* (which also has stalked black glands on the sepals) by the lack of conspicuous pubescence on its stems.

NVC: CG 2

East Berks: local and rare, mostly in dry beech woods on calcareous soil in the Thames valley, with an outlier at Finchampstead (1897). Remenham (1999), Ashley Hill (1966), Knowl Hill (1897), Bisham Woods (1961), Temple Golf Course (1984) Cookham Dean (1999). Bisham Wood, Wargrave, Finchampstead, Remenham, still found in the grounds of Park Place, Culham Court, Hurley, between Stubbings Heath and Ashley Hill. Bowen confirmed most of Druce's locations. Now extinct at 3 of its 7 former sites. Now restricted entirely to the northern loop of the Thames from Park Place [7781] and Remenham [7783], Quarry Wood [8685] to Winter Hill and Cock Marsh [8887]. <1% (1km²). Atlas 2000: [78], [88]

West Berks: very local, absent from the entire area, save for a wooded enclave of c.10km radius, centred on Upper Basildon. Ilsley [48], Upper Basildon, Streatley (**RDG**) and Ashampstead Common [57], Blewbury [58], Bagley Wood [50], Bradfield, Lower Basildon, Tilehurst, Great Bear Wood (**RDG**) and Sulham Wood [67]. On the railway embankment at Purley [657764] in September 2002. Atlas 2000: [48], [58], [50], [67]

Hypericum elodes L. *Marsh St John's-wort*

hel 6 ↓

Wet places on heaths, marshy margins of pools in heathy situations. Acid ponds and small pools in *Sphagnum* bogs; locally dominant but rare and decreasing. It forms a floating mat at the edge of a pond, where the *Molinia* tussocks give way to open water.

Ascot: locally abundant in shallow water on the southern edge of Englemere Pond, forming extensive rafts of foliage, and less frequently on the northern edge (1979-2004). By Sole's Pond to the east of Ascot Station in 1975. At the edge of Rapley Lake 1966-86. Tower Hill. Still at all of these sites in 2004.

East Berks: first record Bulmarsh Heath, two miles from Reading (1652). Sunninghill (1773), Windsor Great Park, Ascot, Bagshot Heath, Wellington College Lake, Sandhurst College Lake, Ambarrow, Caesar's Camp, Broadmoor, Owlsmoor, Long Moor, Bulmershe, Kings Mere, Heath Lake, White Moor. Confined to the south, but lost from many of its former sites as a result of urbanisation and pond filling. 1% (1km²).

West Berks: confined to the south, and centred on the commons from Newbury [46] to Burghfield [66]. Greenham Common [46], Sole Common and Snelsmore Common [47], Crookham Common, Bucklebury Common and Cold Ash Common [56], Padworth Common, Mortimer, Burghfield, Aldermaston decoy pond [66]

Viola canina L. *Heath Dog-violet*

hp 4 ↓

Viola canina subsp. **canina**

A local speciality of sandy, heathy ground (avoiding the clay); very rare and spaced in the 4 corners of the county. Fens, damp grassland both acid and basic, and dry heaths. Known from *V. lactea* by clear blue (rather than cream to greyish violet) petals, leaves ovate (rather than lanceolate) with cordate or truncate (rather than rounded or cuneate) bases. Druce writes "although local in the north and the east of the county, this species is frequent in the Kennet and Loddon districts. It appears to be eminently an arenaceous [sand loving] species, and consequently avoids the Oxford and Kimmeridge Clay and the Gault formations. In the Wytham meadows it occurred on a stratum of gravel".

East Berks: heaths between Ascot and Bagshot, Bracknell, Park Place, Windsor Great Park, Loddon Bridge (**OXF**) in 1891, Stubbing's Heath, Wellington College, Finchampstead, Wokingham, Sandhurst, Cookham Dene, Swinley. Very local; near Wokingham (1965). Now gone from all of its East Berks locations. Atlas 2000: no records.

West Berks: Inkpen Hill [36], Cothill and Frilford Heath golf course [49], Wytham Meads (**OXF**) [40] where it has long been extinct in what Druce called "an unexpected locality", Burghfield Common (**RDG**) [66] in 1917, Pangbourne Meads (**LAN**) [67] in 1963. Brimpton Common [5763] Silchester Common [6262]. Removal of the old runway at Greenham Common produced a perfect habitat on compacted open gravel; there were more than 300 plants in flower at the western end [4864] on 20 April 2002. About 20 plants in grass near the Laser Tunnel at AWRE Aldermaston [5963] in 2003. Atlas 2000: [36], [49]

Viola lactea Sm. *Pale Dog-violet*

hp 5 ↓

Open spots on lowland heaths, often amongst gorse, prospering after soil disturbance. A local speciality, but much reduced in abundance. Its distribution is centred on the New Forest and it is extinct at most of its Berkshire sites. NVC: H 3

Ascot: first record "From a disused brickfield on a heath-covered waste, by the left side of the road from Bagshot to Ascot Station" (**OXF**) (Watson 1869); he must mean the Swinley site. Druce knew the plant from "one or two places on Bagshot Heath". I have never found it.

East Berks: near Loddon Bridge (1897). Bowen did not find the plant in any of Druce's locations in our area. Nor have I. We must sadly conclude that it is extinct in East Berkshire.

West Berks: still present on Inkpen Common in 4 heathy spots [3864], but probably gone from Thatcham (**RDG**) in 1936 and from Aldermaston [56], Mortimer Common (**OXF**) [66] and Three Firs on Burghfield Common (**RNG**) [6566] in 1926. The Inkpen population has responded well to scrub clearance and the introduction of grazing horses; on 8 May 2005 there was a 10m x 12m patch of plants just north of Arthur's Seat, growing with *Pedicularis sylvatica* and *Polygala serpyllifolia*.

Viola palustris L. *Marsh Violet*

hr 4 ↓

Marshes, bogs, alder swamps, wet portions of heaths, preferring peaty soils; locally common, but very rare in the northern part of the county. Still declining in abundance as a result of drainage and habitat destruction. NVC: M 24,27; S 1,3; W 4,5

East Berks: Druce considered the plant to be "common only on the acid sands along the southern boundary of the county", from Virginia Water in the north-east to Long Moor bog in the south-west. Absent from all the ground north of 70. "An abundant plant on the Bagshot Sands in the Loddon district. Swampy gullies in alder woods", Grebe Pond

between Crowthorne and Wokingham (**RNG**), Virginia Water, Windsor Great Park, Long Moor bog, east of Ascot Station [9268], Wishmoor Bottom [8763], Wellington College (**RNG**). It is now very local and uncommon; one of the best surviving stations is on Wishmoor Bottom at the Royal Military Academy just north of the second bridge [877627]. Atlas 2000: [86], [97]

West Berks: except for outlying stations in the Northern Loop of the Thames at Cothill [49], Chilswell Copse and Hen Wood [40], the plant is confined to the Kennet valley from Inkpen and Kintbury [36], Snelsmore Common and Upper Ashpiece Woods [47], Greenham Common [46], Crookham Common, Wasing Place, Bishops Green and Aldermaston [56], Aldermaston Soke, Round Oak Woods and Ufton Nervet to Burghfield (**LAN**), Silchester and Mortimer Commons (**RNG**) [66]. Recently recorded from Tadley Common [6062] (**RNG**). Atlas 2000: [46], [47], [40], [56], [66]

Teesdalia nudicaulis (L.) W.T. Aiton *Shepherd's Cress*
Iberis nudicaulis L.

th 4 ↓

Bare spots and dry sandy banks on heaths, wall tops, and open patches on sand or gravel, on grass heaths and disused railways, in ground disturbed by rabbits or natural erosion. Found with *Ornithopus perpusillus*, *Aira caryophyllea*, etc. Often overlooked in flower in spring, it is more conspicuous in fruit. Declines under scrub encroachment and cessation of grazing.
NVC: U 1

East Berks: John Ray recorded it from Coleman's Moor in 1680, but it was local and rather rare even in Druce's time: "Ambarrow, Longdown Lodge Brickfield, Wokingham, abundant on a common near Bracknell, Sandhurst, near the railway from Bracknell to Wokingham, by the lodge near Wellington College Station". Eversley Common (**BM**) in 1890. Near Bagshot in 1897. By Bowen's time it was "Decreasing and very local. Dry banks on acid soil in south-east Berkshire. By the railway at Sandhurst (**RNG**) in 1947, and between Wokingham and Bracknell in 1965". Not seen recently, and presumed extinct in East Berkshire.

West Berks: a local speciality of open, sandy ground. Pickets Heath, Youlbury [486031], about 300 plants in a fallow in 1981, Frilford Heath golf course (10 plants in 1981 and 1996, 8 in 2004) and Tubney [49], Great Oakley, Chawley Hurst and Boar's Hill [40], Burghfield Common (**RDG**) [66] in 1913. In Dry Sandford pit in 1980 and Hitchcopse pit in 1981 [49]. Camilla Lambrick reported "many hundreds" of plants near Chilswell Priory [486031] in 2004. Perhaps the easiest place to see the plant these days is on the wall at English Nature's headquarters at Foxhold on the southern edge of Crookham Common [5163]. Susan Erskine found 6 plants on Frilford Heath golf course, in the rough between the 5th and 7th fairways of the Green Course [447988] on 13 April 2005. Atlas 2000: [49], [40], [56], [57]

Iberis amara L. *Wild Candytuft*

th 7 ↓

A scarce annual plant of bare ground in chalk grassland (e.g. rabbit scrapes), especially on south- and south-west facing slopes, chalk pits and canopy gaps in storm-damaged woodland. An early successional species, rapidly replaced by more vigorous species in the absence of repeated disturbance, but possessing a long-lived seed bank. Suffered under the conversion of downland to arable farming under the CAP and from scrub encroachment following myxomatosis. Very rare as a garden escape (the common garden escape is the perennial *I. sempervirens*). A local speciality, told from *I. umbellata* by its smaller fruits (3-6mm rather than 7-10mm) and its inflorescence which is elongated (not corymbose) in fruit.
NVC: CG 2

East Berks: chalky fields, locally common in Druce's time "near Henley, Hurley, and about Marlow, chalk pit between Henley and Wargrave, frequent near Park Place, fields near Culham almost white with blossoms". Bowen knew it only from arable fields and disturbed chalk grassland at Hurley [818822] in 1961. Careful management has allowed it to prosper in Hurley chalk pit, where it was frequent on scraped areas of the floor of the quarry in June 2002 and 2004. <1% (1km²). Atlas 2000: [88]

West Berks: on chalk downs. Knighton Down and Compton Beauchamp [28], Whitehorse Hill [38], East Ilsley Down [48], Upper Basildon [5976], Lowbury Hill, Moulsoford, Fair Mile (**RNG**), Aston Upthorpe Downs, Streatley (**LAN**) and Cholsey (**BM**) [all 58], Hinksey [50], Pangbourne chalky railway cutting (**RNG** and **HULL**) in 1872 [67]. The most recent sightings were on Aston Upthorpe Downs [544835] in May 2002 and [545839] in June 2000, but other spots worth searching are near Streatley [5880] and Blewbury [534820] and [534825] where the plant was last seen in 1971. Atlas 2000: [28], [38], [48], [58], [68]

Brassica rapa subsp. **campestris** (L.) A.R. Clapham *Bargeman's Cabbage*
Brassica campestris L.

ch 5

Brassica rapa L. subsp. *sylvestris* (Lam.) Janchen

A local speciality of riverbanks and brook-sides; this native perennial species is locally common and much more permanent than Oilseed Rape. Bargeman's Cabbage is occasional but conspicuous along the margins of the Thames all the way from Lechlade [29] down to Runnymede [97], but is much less common on the southern rivers of the county, and absent from most of the interior. This is a flood-responsive species; Michael Wilkinson and his colleagues at Reading University have shown that the plant is much more abundant by rivers than by canals, and that on the River Thames, the plant is significantly more abundant immediately below locks than immediately above them. The most spectacular display is just over the county boundary [TQ 0272], where the M25 motorway crosses the R. Thames at Hythe End (v.c.21) and at nearby Runnymede [TQ0171] (v.c.17). Here, both banks of the motorway are dominated by dense stands of Bargeman's Cabbage, which is much more abundant on this part of the motorway than is Oilseed Rape. Bargeman's Cabbage flowers later, and is still flowering after the Oilseed Rape has gone over. Told from *B. rapa* subsp. *rapa* by its slender (not swollen) root, and from *B. rapa* subsp. *oleifera* by smaller (< 1.6mm dia.), grey or blackish seeds (not red brown, more than 1.6mm dia.). Skeletal plants by the riverside in late summer can be told from Oilseed Rape, *B. napus* subsp. *oleifera* by the seeds, which are small (c. 1mm) and grey, not big (c. 2mm or more) and black.

Ascot: no records. Not in Silwood Park.

East Berks: near Sandford Mill on the Loddon and plentifully by the Thames from Sonning to Maidenhead. Common on the Thames banks at Old Windsor Lock and on Windsor Racecourse. Large patches dominate the lane sides by Bray Marina. Frequent along the bank by the Thames Path from Henley via Remenham to Aston. Frequent on the islands at Hurley Lock. Uncommon on the stretch from Maidenhead to Cookham. Locally abundant on the Thames bank between Sonning and Sonning Lock, where a concerned local resident was fretting about the "terrible Oilseed Rape problem"; he was somewhat crestfallen to learn that he was referring to a cherished native plant rather than a rampant trifid. Sporadic and rare in waste places elsewhere, away from the river.

West Berks: occasional by the Thames from Lechlade to Streatley. Often growing with *Brassica nigra* downstream as far as Wallingford. Common at Cholsey Marsh [5886] in the Thames-side nature reserve. Uncommon by the Thames-side path through Oxford as at Donnington Bridge [5204]. By the Kennet and Avon Canal in the centre of Hungerford [337687] in 2002.

Pyrola minor L. *Common Wintergreen*

chh 6

Woods and plantations on acid soils, often under pines; very local and rare.

Ascot: a local speciality. The first record: "Without flowers in a coppice of oak and birch scrub, a short half mile across the bog, eastwards from Ascot Station" (Watson, 1871). In a boggy wood west of the main road at Ascot Station in 1975 (**OXF**) [9168]. I can not find either of these two sites (although both may be errors for Englemere; west not "eastwards" in the first case, and an easting of 90 not 91 in the second case). Tower Hill (1966). There is still a small patch at Whitmoor Bog close to the security gates to the gas depot [892685] (1987-2004). Very local and rare under pines at Englemere [902684], close to the stile by the railway bridge opposite Whitmoor Bog Cottages. I have pulled up the overgrowing bracken fronds and cut back the brambles each year in May since 1980, and the patch is thriving but spreading only slowly, measuring 5m x 3m in spring 1999, 6m x 3m in 2002 and 8m x 3m in 2004 and dominating 9m of the path-side with outlying plants up to 12.5m away by 28 May 2006. Still along 9m of path side in the original patch on 27 April 2007, but the second patch, closer to the cottages, occupied 2m of the path side beyond the yellow azalea.

East Berks: "plentiful on Finchampstead Ridges, near the Spout Pond" (Druce, 1897). Wellington College (**RNG**) [8363] in 1928 and 1961, Honeyhill [823664] in 1965, pine wood at Broadmoor Bottom [856628] in 1970, in damp alder wood at Long Moor [7865] in 1983, Royal Military Academy Sandhurst in a pine-wood on Windsor Ride [865619] in 1983, on the north side of Heath Ride on Barkham Ride [817639] in 1986, south-west of Heath Pond [811639] in 1986. There is a good population on the trackside in the pine woods at Upper Star Post adjacent to the reservoir [873646], consisting of two patches (4m long and 2.5m) in June 2002, planted by Ted Green in the 1970s. The best population at the moment is in the birch woodland to the north-west of Heath Pond in Simon's Wood [813642]; the largest of the patches stretched along 32m of the pathside in May 2002, and there was a smaller patch 100m to the south.

West Berks: no records.

Hottonia palustris L. *Water-violet*

hyd 5 ↓

A local speciality of ditches and ponds with nutrient rich water, mostly near the Thames.

Ascot: very local and rare; a small but thriving population in permanent standing water beneath *Salix cinerea* and *Iris pseudacorus*, growing with big tussocks of *Carex curta* in the swamp at the western end of Sunningwell Bog [925682]. The pond is just east of the point where the road past Ascot Station turns sharply right to go under the railway bridge. The population was in fine condition on 26 May 2002 with several hundred flowering spikes, and still in good order in June 2006. First recorded from the nearby acid pool of Lower Sole's Pond east of Ascot Station in 1975 (OXF), where they were thought to be planted. In fact, these plants are an outlier of the main population, which is 50m to the south-east, through the boundary fence below the railway embankment. There was still a small patch close to the north-east shore of Sole's Pond [925683] in June 2006.

East Berks: all but confined to the Thames meadows: Maidenhead, Windsor (E) in 1848, New Lock, ponds at the foot of Cookham Down, Sandford Mill, Sandhurst, plentiful in Sonning Meadows, Coleman's Moor, Blackwater, Twyford, Hurst, Stanlake, near Loddon Bridge. Ruscombe (1954) Waltham St Lawrence (1955), ditches between Marlow and Remenham. Decreasing fast. Whitley Wood [7168] (1956) (LAN). More than 500 plants in Great Lea Pond at Three Mile Cross [709687] in 1988. Much reduced and still declining. Now rare in the western reaches of the Thames from Sonning to Cookham but extinct or planted elsewhere. Formerly on the R. Blackwater at Sandhurst. Still at Cock Marsh, Great Lee Pond and Crazies Hill. <1% (1km²). Atlas 2000: [76], [77], [78], [87], [88], [96]

West Berks: "In all the ditches about Oxford" in 1666 (Merrett). Scattered records from the length of the Thames from Carswell down to Reading, rare or extinct in the Kennet valley, absent elsewhere. Buckland and Carswell [39], Hemp Hole near Newbury [46] in 1809, Abingdon [49], Bablock Hythe ferry and Wytham [40], Aldermaston [56] in 1987, Cholsey and Moulsoford [58], Radley [59], South Hinksey and Kennington [50], Tilehurst and Theale [67]. Atlas 2000: [39], [46], [49], [40], [56], [58], [66], [67]

Umbilicus rupestris (Salisb.) Dandy *Navelwort*

hs 6 ↓

Cotyledon rupestris Salisb.

Umbilicus pendulinus DC., nom. illegit.

A local speciality of old limestone walls, in and about villages. It is at the extreme eastern edge of its range in Berkshire (see Fig. 2.3 and Plate 15). It is at its happiest in the far west of Britain, in the damp, coastal conditions of Cornwall or West Wales, and finds most of Berkshire intolerably dry.

NVC: OV 41

East Berks: there is a record from Reading in 1843 but nothing since. There is an unlocalized record in the *Flora of Hampshire* from tetrad [8260] by the R. Blackwater. Atlas 2000: no records.

West Berks: confined almost exclusively to the Golden Ridge, with one southern record from the Roman ruins at Silchester [6262] in 1984 (but this may be on the Hampshire v.c.12 side of the border). On old limestone walls at Buscot, on the church roof at Little Coxwell [29], Littleworth, Longworth Manor, Longworth Church and on the top of the garden wall of Hinton Waldrist Grange [39], Donnington [46], Marcham, Tubney and Abingdon [49], Dry Sandford churchyard and Wytham Abbey [40], Sutton Courtenay and Culham churchyard [59], South Hinksey [50], on the Roman walls at *Calleva Atrebatum* [66]. Common only at Longworth and Hinton Waldrist [39] in 2002-04. Atlas 2000: [29], [39], [40], [59], [66]

Chrysosplenium alternifolium L. *Alternate-leaved Golden-saxifrage*

hs 4

A local speciality of sheltered streambanks in oak and alder woods. Very local and rare in the southern part of West Berkshire, best seen on the slopes of Greenham Common. Usually growing with *C. oppositifolium* and much less common than it, but the big, Pennywort-sized, basal leaves of *C. alternifolium* are distinctive, and the edges of the inflorescence are greener (less uniformly golden coloured). The basal leaves are told from *Glechoma hederacea* by the small bristles (rather than dense hairs) on the upper leaf surface, and the indistinct veins on the underside of the leaf. The jizz of the crenate leaf margins is also distinctive (indented rather than convex).

NVC: M 36

East Berks: no records.

West Berks: in Rivar Copse on Inkpen Hill [350621] in 1955, but I can find no ground remotely wet enough to support the species at this location in 2002. Recently in alder gullies on the north-facing slopes of Greenham Common [46], Crookham Common [56] and Great Wood (north of The Round House) [5165]. The most accessible site is in Aldernbridge Gully at [491640], in streamside mud just 150m north of the A339 road which runs along the southern edge of Greenham Common. Atlas 2000: [46], [56]

Parnassia palustris L. *Grass-of-Parnassus*

hs 7 ↓

Marshy places and bogs. One of Berkshire's great rarities, restricted to the Ock district. Fens, especially in old peat cuttings, with *Molinia* and *Schoenus*.

NVC: M 13

East Berks: no records.

West Berks: restricted to fens on the interior of the Northern Loop. In a bog between Tubney and Oakley House in great abundance in 1833. On Abingdon racecourse in a marshy spot, rather plentiful (pre-1897). Now found in only 4 sites: Frilford Heath golf course [442986], Cothill fen [49], Barrow Farm fen [49] and near Wootton [40]. Planted on Jarn Mound [4802] in Sir Arthur Evan's British Flora Garden in 1933 (see p. 123). Atlas 2000: [49]

Potentilla argentea L. *Hoary Cinquefoil*

hs 6

A local speciality of short, heathy grass swards on slopes and banks on warm free-draining soils with *Ulex*, *Festuca*, etc.; absent from calcareous soils. It colonises new sites poorly, but is long-persistent in established sites. Distinguished from other cinquefoils by its narrow, parallel-sided leaflets, white tomentose beneath, and from *P. inclinata* by its smaller petals (4-5mm not 5-7mm).

NVC: U 1

Ascot: Kingsride in 1965, no recent records.

East Berks: roadsides and hedge-banks on sandy soil in sunny places; very local and rather rare. Near Lucas Hospital, Wokingham, Bulmarsh Park, Earley, old brickfield in Wellington College grounds, Loddon Bridge (**RNG**), Bray Wick, Maidenhead, plentiful in a gravelly lane between Coleman's Moor and Twyford (all pre-1897). Wellington College (**RNG**) in 1915, Finchampstead (**RNG**) in 1918. Formerly associated with other rarities like *Dianthus armeria*, *Petroselinum segetum*, *Torilis nodosa* and *Arabis glabra*. Wellington College (1960), Woodley (1962). Recently from Brook Farm, Winkfield [9071]. <1% (1km²). Atlas 2000: [77], [86], [97]

West Berks: local and rare centred on Frilford Heath golf course [4496] in the north-east and on Yattendon in the south-east; absent elsewhere. Frilford pit [448986] in 1988, Cothill [463000] in 1972, Tubney meadow [442991] in 1998, a ride on the southern end of Tubney Wood [446992] in 2005, Frilford Heath North Field [447981] in 2001, specially prepared bare ground on Frilford Heath Golf Course practice ground [4498] in 2003 and 2005, Drayton [4692], Wasing pits [5863] in 1988, dozens of plants on gravel near Building C24 at AWRE Aldermaston [5963] in 2003, Yattendon [57], path-side near Ufton [617677] in 2002, Padworth Bridge Mill [66], Theale pits (**RNG**) [67] in 1953. Atlas 2000: [49], [40], [56], [57], [66], [67]

Potentilla anglica Laichard. *Trailing Tormentil*

hs 6

Potentilla procumbens Sibth., nom. illegit.

A local speciality Woods, heaths, hedge-banks; rather local and not very common. Wood margins and woodland rides on moderately acid soils. Occasional but decreasing; absent from the chalk. This species arose by hybridisation associated with chromosome doubling; its parent species *P. erecta* and *P. reptans* both have 28 chromosomes, and *P. anglica* has 56. Told from *P. erecta* by some flowers with 5 petals (not all 4-petalled), carpels > 20, lower stem leaves with long petioles, > 10mm. Much over-recorded for *P. x mixta* (see above), which has few if any swollen achenes (it is a sterile hybrid) and all petioles the same length - not decreasing markedly as in *P. anglica*.

NVC: MG 4

Ascot: no recent records, but known in the past from Sunninghill Park and Virginia Water.

East Berks: on the roadside across Bagshot Common, Earley Heath, Twyford, Binfield, Bulmarsh, Coleman's Moor, Bearwood, Finchampstead Leas, Wellington, Sandhurst, Shurlock Row, Windsor Great Park. Bracknell, Frogmore. The latest records are from Loddon Hill Woodley (1968), Ashley Hill (1970), Bulmershe Wood (1972), Jealott's Hill [873733] (1973), Maidenhead Thicket (1986), Great Wood at Waltham [8576] (1987), Coppid Beech (1987) and Bisham Wood (1988). <1% (1km²). Atlas 2000: all except [78], [96]

West Berks: found only to the east of 45 or north of 95. Cake Wood [36], Furzewick Down [38], Pusey and Buckland [39], Tubney Wood and Wytham [40], Bagley Wood [50], Snelsmore and Ashridge Wood [47], Wasing Wood and Aldermaston [56], Hermitage [57], Padworth Gully [6165], Tilehurst [67]. Recent records from Lough Down at

Streatley [5881] in 1986, Moor Copse [6373] in 1983, AERE Aldermaston [6063] in 1999, and Greenham Common [5164] in 2001. Atlas 2000: [29], [36], [38], [39], [46], [47], [49], [40], [56], [57], [58], [50], [66], [67]

Geum rivale L. *Water Avens*

hs 5

A local speciality of meadows and bushy places on peaty soil. Damp woods and water meadows in south-west Berkshire. This plant, so characteristic of woods and streamsides in Northern and Western Britain, is a great rarity in Berkshire.

NVC: M 27; W 8

Ascot: very rare, planted on the grave of Rose Eleanor Challis (d. 7 March 1993) in South Ascot churchyard on 26 April 2004. This is the only grave-planted individual I have ever seen.

East Berks: very rare. The best site is at Stanford End by the Fritillary Meadow. Absent from most of the area. <1% (1km²). Atlas 2000: [76], [77], [86]

West Berks: all but restricted to the Kennet valley. Trenches by the railway from Hungerford to Reading, etc. In Druce's time it was locally common about Theale, Midgham and Aldermaston, often associated with *Carex paniculata*. By Bowen's time it was reduced to a few sites by the Rivers Blackwater, Enborne, Lambourn, Kennet and Loddon. Last seen on Appleton Lower Common [40] in 1982. Now restricted entirely to the south of 80. Hungerford, Inkpen and Kintbury [36], Shefford [37], Hamstead Marshall and Bulls Lock [46], Boxford [47], Goldfinch Bottom, Thatcham and Midgham [56], wet grass by the R. Pang [580716] in 2004, bridge over the R. Kimber by Stanford Dingley [57], Sulhamstead [66], Theale meadows and meadows between Bradfield and Tidmarsh [67]. Recent records from Cake Wood [3068], by the stream at Manor Farm Inkpen [361641], Benham Loch [424672], Sole Common [413707], Boxford [4271], by the R. Pang in Moor Copse [6374]. Atlas 2000: [29], [36], [46], [47], [56], [57], [66], [67]

Stachys officinalis (L.) Trevis. *Betony*

hs 6 ↓

Stachys betonica Benth.

Betonica officinalis L.

Ancient grassland, woodland rides, roadsides, hedge-banks, coppices, heaths, etc. "This pretty species is scattered throughout the county rather frequently, occurring in most parishes where there are woods" (Druce); occasional in south Berkshire, but local or absent from clay soils. Much reduced in abundance, as ancient grasslands were ploughed up, fertilised or reseeded.

NVC: CG 2; MG 4,5

Silwood Park: one of our most attractive native wildflowers. Rare, but locally frequent in Water Meadow where the site is managed solely for the encouragement of Betony. The encroaching oaks are removed every 10 years or so, and the *Arrhenatherum*, *Dactylis* and brambles are cut down every 3 to 5 years, with the hay carried away to deplete the soil nutrient status. Regenerating well in April 1994 following the felling of the oaks in winter 1992-93. Four good colonies, each of about 50 plants, two on either side of the path to Cheapside on 3 July 1998, following clearance of the oaks in the previous winter. This population was rather poor in July 2000. The scrub was cut back in March 2002, after which there was good flowering on the eastern edge of the clearing in August 2002 (whereas the plants by the central path had gone). Locally frequent in the surviving open areas (i.e. those not filled by brambles and birch) in September 2005 prior to scrub clearance in winter 2005-06. There were a few plants amongst *Arrhenatherum* on The Farm side of the central path (with numerous *Stachys sylvatica*), with many more plants on the other side of the path, on the fringe of the clearing close to the Gas Pipeline on 28 June 2007. Local and rare as a native in Nash's Field; there were single plants in 3 of the 6 rabbit-fenced plots (A, B and D) in September 2003. There was a single clump of 50 flowering stems in the middle of the fenced, uncultivated Block D on 26 June 2007 surrounded by tall *Arrhenatherum elatius*. Local on Nash's Slope, two clumps appeared in 1991 following bramble clearance, at the far end, towards the Church Lane footpath on 2 August 1991. Scattered individuals at the brow of the ridge in Nash's Field, overlooking the Kissing Gate; 16 July 1982; Ted Green recalls the plant being much more frequent here; not seen since 1984. Introduced from Dinton Pastures to the woodland garden behind Southwood Halls by Ted Green in 1984, initially abundant, it declined in the shade of the *Frangula alnus*, but still persists as slender, pink flowered plants in July 2005. Spectacularly successful colonist of the Chalk Plots where it was sown in May 1983. Found there each June since 1986. On all the plots except 1 and 2 on 2 August 1991. In flower on Plots 3, 4, and 5; 9 July 1993 with 4 to 8 stems on each plot. Fantastic on plots 3, 4, and 5 in July 1998 and 1999 with more than 20 flower stems on each plot, and even better in July 2000 when there were more than 200 flowering plants on plots 3 and 4. There was even a flower protruding above the *Calluna* monoculture in plot 2 on 29 October 2000. In July 2002 the plant was absent from Plots 1 (control grassland) and 2 (Heather monoculture) but frequent on all the others, and most abundant on Plot 4. In 2003, it was more or less restricted to Plots 3 and 4, while in July 2004 it was most abundant on Plots 4 and 5. An outstanding display in June 2006 after a very dry winter, but still not invaded the undisturbed control Plot 1, despite its frequency

on the adjacent Plot 5 and amongst heather on Plot 2. On 26 June 2007 the following numbers of flowering stems were on plots 1 to 8: 0, 7, 50, 150, 35, 2, 1, 10. Sown in the Chamber's Seed mixture in Blocks G, H and J of Nash's Field in October 1991 without any recruitment. Sown in the Oak Mead Experiment in 1996, but persisting only on the grazed part of Block D by 2001.

Ascot: rare in Sunninghill Park from 1979-2004.

East Berks: two centres, one in the north on the chalk in the Thames valley around Hurley and Cookham and another in the south around Wokingham and Bracknell. Absent or rare between these two regions and to the east of 90. A white flowered form was seen in Windsor Forest in 1894. Recently at Highlands, Riseley Farm, Ryeish Lane, Whistley Park, Thatcher's Ford, Farley Hill, Arborfield Garrison, Finchampstead Church, Thames Valley Park, Dinton Pastures, Wargrave Marsh, Moor Green Lakes, Coalpit Copse, Shepherd Meadow, meadows below the Camberley Superstores, North Bracknell, Warren Row, Oakley Court, Windsor Great Park. 5% (1km²). Atlas 2000: all except [78]

West Berks: Fernham meadows [29], Ilsley Bottom [48], Tubworth Barn meadow and Frilford Heath [49], Oven Bottom and Old Butts [58], Bagley Wood and Kennington [50], common south of 75, rare and scattered to the north of this, and absent from much of the interior. Locally frequent on grassy rides through Fence Wood [5171] in 2002. Atlas 2000: all except [39], [68], [69]

Succisa pratensis Moench *Devil's-bit Scabious*
Scabiosa succisa L.

hs 6

Pastures, moist woods, damp grassy heaths on acid soils including clays. Locally frequent in south Berkshire but rare or absent on calcareous clays.

NVC: CG 2-5; M 13,16,21,22,24,27; MG 4,5,9; W 4

Silwood Park: local and rare. In the southern part of Water Meadow, close to the Betony on 4 August 1982; none seen following the scrub clearance of March 2002. Evidently, the betony responded much better to scrub clearance than did the scabious. There was a single patch (with betony) on the western edge of Water Meadow on 20 September 2005, prior to scrub clearance in winter 2005-06. A single clump in flower on 28 August 2006. The seed sown in Nash's Field in 1991 never took. Locally frequent inside the rabbit fence on Nadia Waloff's former broom plot in Nash's Field on 6 September 2002 and 15 September 2005.

Ascot: locally abundant in various places on Ascot Heath, as in the outfield of the Cricket Pitch, in the northern triangle, and at Brook Farm, Winkfield.

East Berks: recently at Stanford End fritillary meadow, West Emmbrook, Ravenswood, Heath Lake, Shepherd Meadow, Camberley Superstores, Chawridge Bank, Wishmoor Bottom, Cock Marsh, heathy rides in pine plantations at Bracknell forest, Larges Lane Cemetery in Bracknell, Windsor Great Park. 2% (1km²). Atlas 2000: all except [78]

West Berks: common throughout the Kennet valley and in the Northern Loop (as at Cothill Fen [49]) but less common on the clays of the interior. In the water meadow at Boxford [4271], chalk grassland at Seven Barrows [3282], grassland at Cleeve Hill [332764], and on downland at Whitehorse Hill [28] and [38] and Aston Upthorpe Downs [58]. Locally frequent on grassy rides through Fence Wood [5171] in 2002. Atlas 2000: all except [68], [69]

Trifolium ornithopodioides L. *Bird's-foot Clover*
Trigonella ornithopodioides (L.) DC.

th 5 ↓

A local speciality of bare places on acid soils. Essentially a coastal plant in England and Wales, thriving in trampled places like car parks, tracks, viewpoints and picnic sites. It is typically a winter annual, but its rosettes are tolerant of winter flooding.

East Berks: extinct, formerly at Sutton's Nurseries at Reading (**RNG**) in 1889 and Shinfield (1918).

West Berks: known from Greenham Common in 1893. Bowen considered the plant to be extinct in Berkshire, but it is still (1999) locally plentiful on Greenham Common [4560] in very short, open sandy heath in the south-east corner, where it was first recorded in 1893. The open (extinct) symbol in the Scare Plant Atlas for [46] is an oversight. Still there in some numbers as tiny cushions, flattened to the ground by rabbit grazing, on the occasion of the BSBI visit on 23 June 2007.

Trifolium scabrum L. *Rough Clover*

th 5 ↓

A local speciality of bare sandy places on dry fields and commons. A coastal species that is very local and rare inland. The lateral veins of the leaflets are thickened and arched-recurved at the leaf margin which distinguishes it from *T. striatum*.

East Berks: extinct. Formerly on ground occupied by a brickyard near Twyford (1897). Bowen did not find it here, despite repeated search. Atlas 2000: no records.

West Berks: still at Frilford Gold Course (**RDG**) [448986] and 2 flowering plants recorded by Susan Erskine at [442976] on 22 June 2005 in a scrape made by English Nature to encourage seedling recruitment, Hills Sandpit at Tubney [40] in 1995 and 2003, formerly at Cothill [49], Bessels Leigh [40], Padworth Common [66], Bradfield [67]. Atlas 2000: [49], [40], [59]

Myriophyllum verticillatum L. *Whorled Water-milfoil*

hyd 7

Rivers, streams, ponds and ornamental waters; “locally common and widely distributed in all our larger streams and large sheets of ornamental waters” in Druce’s time; now uncommon. A scarce plant in Britain. Submerged aquatic with emergent flowering spikes, found in ponds with base rich water, often growing with water lilies and pondweeds. Declines by over-deepening or canalisation of waterways, and by overtopping by bulky emergent monocots.

Ascot: local and rare: Sunninghill Park Lake.

East Berks: in ditches with nutrient rich, calcareous water. Mostly by the R. Thames from Sonning to Hurley, and from Crown Estates. Recorded from a stream in Reading (**LAN**) in 1957. Ditches near Bray. Local, Henley Reach, Wellington College. Cookham Moor, Widbrook Common, Dinton Pastures, Thimble Farm. Atlas 2000: all except [76], [97]

West Berks: occasional throughout the Thames valley from Lechlade [29] down to Reading [67], but absent from the bulk of the area and not recorded from the Kennet valley save for a single record from Hungerford [36]. In an old pit at Appleford Holt (**OXF**) [5293] in 1976. Atlas 2000: [29], [36], [39], [40], [58], [59], [50], [67]

Myriophyllum aquaticum (Vell.) Verdc. *Parrot’s-feather*
Eryndria aquatica Vell. Conc.
Myriophyllum brasiliense Cambess.

• hyd 6 ↑

This is the common aquarists’ plant, becoming naturalized in ponds where it has been thrown out. An aggressive alien, covering over whole ponds, and turning them terrestrial by the end of summer with their solid carpet of emergent, water repellent bright green shoots (the eponymous Parrot’s feathers). Told from *M. verticillatum* (which also has its leaves in 5’s per whorl unlike the 4 per whorl of *M. spicatum* and *M. alterniflorum*) by the dense sessile glands which make the emergent leaves so amazingly water repellent, and by the whitish, entirely female flowers (*M. verticillatum* has reddish flowers, the upper of which are male). This is a pestilential weed of ponds in subtropical countries.

Silwood Park: grown in an aquarium in CABI’s open Polytunnel in July 2004 without any security measures.

East Berks: local and rare. In the ornamental pond in Savernake Park, off New Forest Ride in eastern Bracknell [886677] where, in the absence of harsh winter weather, it can dominate large areas of the water surface in early summer. In the pond of the primary school on Oxford Road in Reading [7073] in July 2002. Atlas 2000: [86]

West Berks: no records until 1998, when the plant was found in Abbey fishponds at Abingdon [511981]. Found by Susan Erskine in the pond at Lydes Copse [296931] in April 2004, where it was spreading rapidly.

Myriophyllum spicatum L. *Spiked Water-milfoil*

hyd 6

Ditches, ponds, streams, water tanks, canals; locally common in base-rich water. Told from *M. alterniflorum* by its whorled (not opposite or alternate) leaves, and by its reddish, spike-like emergent flower stalks.

Silwood Park: locally dominant in the metal-sided Water Tank that was built for fire-fighting during army occupation of the Park in the Second World War. Still abundant in June 2003 after the water level fell catastrophically (but for unknown reasons) in 1998. The water level in the tank was so high for the whole of 2007 (from January to December) that the plant could not grow tall enough to reach the water surface to flower. I have no idea where the water comes from to fill the tank, but it has been full to the brim for many months now. Still full continuously to April 2008.

East Berks: Cookham Dene in shallow ponds, ditches opposite Hurst Grove, in the Thames at Henley, Remenham, Sonning, Wokingham, ditches by Loddon Bridge, Windsor Park, Sandhurst, Wargrave, Bracknell, Wellington College. Occasional in the Thames valley from Reading to Sonning and Hurley and throughout the south (south of 70). In the R. Loddon at Swallowfield [717649] in 1977. Absent from the interior (north from 70 to the Thames). Old gravel pits at Dinton Pastures [7882] in 1988. Recently at Howland Bridge, Crazies Hill. Moor Green Lakes nature reserve [8062] in 2001. Atlas 2000: all except [78]

West Berks: occasional along the whole length of the Thames from Lechlade [29] to Reading [67] and the whole length of the Kennet from Hungerford [36] to Reading [67]. Absent from the interior (north of 70 and south of 95). In the R. Enborne at Crookham [542637], Greenham [488638] and Brimpton [553634]. In the R. Pang at Pangbourne [637756] in 1977. In the R. Kennet at [3568] and [4266] in 2006 (D. Broughton). In a pond on the Wasing Estate [584635] in 2003. Atlas 2000: all except [38], [47], [48], [57], [68], [69]

Myriophyllum alterniflorum DC. *Alternate Water-milfoil* hyd 6

Ditches and ponds in base-poor water. The upper flowers are not in whorls (as they are in *M. spicatum*) but are opposite or alternate, and the leaves have many more segments (13-38 compared with 6-18).

Ascot: very local in Virginia Water [9668] in 1987.

East Berks: Loddon Bridge (1699). Very local and rare in a pond near Finchampstead. Ponds with acid water; local in south Berkshire. Long Moor Pond (1965), Sonning, Bulmershe Lake (**RDG**) in 1965, Heath Lake (1961, and still there in 2001), Wokingham (1918), Sandhurst (1965, still there in 2002 in the v.c.22 part of Lower Lake), Trilakes [829614] in 1975 and Broadmoor (1999). Atlas 2000: [76], [77], [86], [96]

West Berks: extinct in Druce's celebrated site in Wigmoreash Pond [36] on top of Walbury Camp and Gibbet Hill (1890) (**OXF**), and from the site at Enborne [46]. More recent records are from Sandford Priory [46] in 1965 and from the R. Cole [29] in 1978. Atlas 2000: [46]

Thesium humifusum DC. *Bastard-toadflax* p 6 ↓

A wonderfully curious plant of short turf in unimproved chalk grassland, dry chalky banks and downs, which is parasitic on the roots of *Asperula*, *Scabiosa*, *Festuca*, etc.; very local and decreasing.
NVC: CG 2,3,5

East Berks: an extinct local speciality, known to Druce from the chalk at Park Place, and near Hurley, but not seen there by Bowen or by me.

West Berks: formerly across the whole width of the chalk, but now extinct or rare to the west of 45, presumably as a result of habitat destruction through fertiliser pollution, ploughing and re-seeding. Kingstone Coombes [270850], Odstone Coombes and Dean Bottom [28], Lambourn [37], Crog Hill, Uffington and Letcombe [38], Cherbury Camp (**OXF**) [39], East Hendred Down, Ardington Down and Knollend Down [48], Hurdle Shaw and Basildon [57], Churn Halt, Lowbury Hill, Blewburton Hill (**OXF**), Streatley Hill (**RNG** and **RDG**), Streatley Downs (**RDG** and **LAN**), Roden Downs, Moulsoford Downs, Kingstanding Hill and Thurl Down [58], but probably extinct at Ashbury [28], Cherbury [39], Farnborough [48] and Cholsey [58]. Recent records from Weathercock Hill [288820], Crog Hill [323835] and Lough Down at Streatley [588810]. The plant would clearly repay further study. Atlas 2000: [27], [37], [38], [48], [57], [58], [67]

Radiola linoides Roth *Allseed* th 7 ↓
Millegrana radiola Mihi

A local speciality of bare sandy or peaty depressions on heaths where water has stood during winter. Tracks, ditches and edges of ponds. Now greatly reduced in abundance. Absent from the chalk, but it used to be locally common on the heathlands of the south.

Ascot: first recorded from Sunninghill by Sir Joseph Banks in 1773. Not seen since.

East Berks: Druce knew it from Heath Pool, Ambarrow, Riseley, Finchampstead, Long Moor, Bagshot Heath, Sandhurst, Broadmoor, Owls Moor. By Bowen's time it was rare and decreasing, close to extinction. The most recent records are from Rapley Lakes [8964] in 1948 and Bracknell [8866] in 1952, east of White Waltham [8575] in 1959, and Wellington College [8060] in 1963. Atlas 2000: no records, but suitable habitat is still to be found about Rapley Lakes, and might repay close scrutiny.

West Berks: restricted to the Kennet valley. Probably extinct at many of Druce's sites, currently restricted to heaths in [56] and [66]. Inkpen Common [36], Wickham [37], Newbury and Greenham Common [46] and [56], Snelsmore Common [47] in 1974 and 2003, Mortimer Common, Aldermaston Heath, Wokefield Common [6566] in 1985, Ufton Nervet and Padworth Common [66], Burghfield Heath [67]. Atlas 2000: [46], [47], [56], [66]

Lythrum hyssopifolium L. *Grass-poly*

o th 6 ↓

A *Red Data Book* species of seasonally wet arable fields. It has pink, crumpled petals, and grows at only 5 surviving sites in Britain (Wiggington, 1999). A spring-germinating annual of hollows, ruts and low-lying ground in cultivated fields, possessed of long-lived in the seed bank. Bowen reckoned that the plant was extinct in Berkshire, but it was rediscovered at Cholsey by Ron Porley in 2001 (see below).

NVC: OV36

East Berks: found only once (by Gotobed in 1805) on a wet piece of ground near Windsor (possibly in v.c.24 Buckinghamshire).

West Berks: collected by Prof. J.S. Henslow at Cholsey from 1825-35 (**OXF, RNG, BM**, etc.) and from "near Wallingford" (probably the same site) in 1897. Not seen again until found by John Souster in 1968. Rediscovered by Ron Porley in the corner of a winter-flooded field near Cholsey (presumably the same place where Henslow found it) at [60535 86154] where there were 435 plants growing with *Juncus bufonius* in tractor ruts west of the main drainage ditch on 14 August 2001. Word soon spread of its rediscovery and there are other references from 2001 and 2002 at [60531 86164], [601864], and a single plant in a wheat-field at [60499 86085] south of Wallingford opposite North Soke (total numbers c.600). After two dry (i.e. non-flooding) winters, there were no plants in 2006. It is ironic that such a rarity as a native plant (but now considered to be an archaeophyte), should be so common as an alien plant overseas. For instance, it has been introduced into New Zealand, and is frequent weed of damp disturbed ground in many parts of both North and South Islands (see also *Mentha pulegium*).

Lythrum portula (L.) D.A. Webb *Water-purslane*

th 6

Peplis portula L.

Wet places and pond margins on heathy ground on the Bagshot Sands.

NVC: OV 20,31,35

East Berks: common in the heathy parts of the district, on the acid sands of the south and east; Bulmarsh, Watery Lane, Park Place, Warren Row, Earley, Ascot, Bagshot, Wellington College, Long Moor, Finchampstead, Sandhurst, Spencer's Wood Common, Ambarrow, Hurst Green, Windsor Park by Virginia Water, Bearwood, Easthampstead Plain. Damp woodland rides, on bare mud in marshes and by streams or ponds. Local and absent from calcareous soils. It is not clear whether it is decreasing or has been overlooked in recent years. Farley Hill, Woodley, Warfield. Sandhurst (1975), Rapley Lakes (1986). Moor Green Lakes nature reserve [8062] in 2001. 1% (1km²). Atlas 2000: [76],[77],[86],[87],[96],[97],[98]

West Berks: all but confined to the heaths of the extreme south-east (south of 75 and east of 45). Inkpen [36], Newbury and Greenham Common [46], Snelsmore Common [47], Cold Ash Common, Crookham Common, Wasing Wood and Carbin's Wood [56], Oare Church pond and Fence Wood [57], Bagley Wood [50] in 1833, Burghfield [66], Aldermaston Soke, Mortimer Common, Ufton Nervet and Silchester [66]. Atlas 2000: [36],[47],[40],[56],[57],[66],[68]

Daphne mezereum L. *Mezereon*

n 2 ↓

A scarce plant in Britain, found in woodland on calcareous soils with *Brachypodium sylvaticum*, *Hyacinthoides non-scripta* and *Mercurialis perennis*, and in chalk pits where there is little competition from other ground flora; very rare and sporadic. Many of the plants, however, are garden escapes.

NVC: W 8

East Berks: in dense woods and thickets; rare and local. Knowl Hill in 1897 and Bearwood (**RDG**) in 1911. In the thicket nearly opposite the whitening factory at Warren Row (1897). Bowen failed to find the plant in these sites. Only one surviving site under beech in Park Wood at Bisham (**RNG**) [851840] in 1983.

West Berks: Wantage [3585] in 1961, Appleton Lower Common [4200] in 1948, Hinksey woods [5004] in 1821, Tubney [4400] in 1821, Frilsham Common [5373] in 1839, Hampstead Norreys (**RDG**) [5276] in 1913, Ashampstead

[5676], Burghfield Common near Three Firs [6566]. Recently recorded by Jacqueline Wright in 2002 who found 4 stems in the north-west pit and 1 stem in the north-east pit at Chawley Brick Pit at Cumnor Hurst [475044]; the plants were struggling by 2004. Atlas 2000: no records.

Sanicula europaea L. *Sanicle*

hr 5

Beech woods, dry oak woods, thickets and bushy places, mostly on calcareous soils; absent from the northern clays and much of East Berkshire. Druce's statement is curious, and it is not clear whether he really meant it when he wrote "abundant throughout the county except in the pinewoods". It is now uncommon to rare, except in the best of the surviving chalk woodlands. It may be a victim of eutrophication and acid rain.

NVC: W 8,10,12

Ascot: no records.

East Berks: scattered and uncommon except on the chalk in the Thames valley. Absent from the interior and the east. Recently at Remenham Wood, Highlands, Park Place, Culham Court, Rosehill Wood, Kiln Green, Scotlands, Temple Park, Dungrovehill, Temple Golf Course, Quarry Wood, Park Wood, Ashley Hill, Maidenhead Thicket, Inkydown Woods, Pinkneys Green. Most of the records are from [88] and there are no recent records to the east of 90. 3% (1km²). Atlas 2000: [76], [77], [78], [86], [87], [88]

West Berks: widespread and locally frequent, but generally uncommon; rare or absent on the northern clays (north of 90 and south of 00). Shrivensham [28], Woolstone, Sparsholt and Kingston Lisle [38], Kitemore Copse [39], Lockinge [48], Steventon, Milton and Tubney Wood [49], Wytham Wood and Appleton Lower Common [40], Bagley Wood and Radley Large Wood [50]. Particularly common on shady banks in Fence Wood [5171] in 2002. Atlas 2000: all except [68], [69]

Scandix pecten-veneris L. *Shepherd's-needle*

o th 4 ↓

Formerly a weed of heavy calcareous arable soils that dry out in summer, but now almost eradicated by herbicide use. Sometimes almost the only weed species, but in other places part of a diverse community with *Kickxia elatine*, *Papaver argemone*, *Legousia hybrida*, *Petroselinum crispum*, *Ranunculus arvensis* and *Valerianella dentata*. In Druce's time it was "very common and generally distributed. Cornfields, too frequent (1809); everywhere about Marlow (1843)". By Bowen's time it was "locally frequent but decreasing. Sonning (1963)". It is now scarce in Britain.

NVC: OV 15

Ascot: no records.

East Berks: local and rare: at the edge of a cornfield north of Drift Road [891753] (1979-2007); the pub next to the site (known locally as The Cider House) burned down under mysterious circumstances in 1998, and was eventually replaced by two new detached houses. Mount Skippet. Formerly in Reading (**RNG**) in 1831, Maidenhead (**HULL**) in 1923, Sonning (**RNG**) in 1963. <1% (1km²). Atlas 2000: [77], [87], [88]

West Berks: a curious central distribution, absent from the Kennet valley and rare in the Thames valley. Fair Mile [58] in 1968, Didcot (**RDG**) [59] in 1939, Tilehurst (**LAN**) [67] in 1956. Aston Upthorpe Downs [550844] in 2002. Atlas 2000: [28], [36], [38], [39], [48], [57], [58], [50], [67]

Myrrhis odorata (L.) Scop. *Sweet Cicely*

• hs 5 ↓

Scandix odorata L.

Another of those aliens that is much commoner in the north of England and in Scotland, presumably because the climate of Berkshire is too dry (*Epilobium brunnescens* and *Mimulus guttatus* are others). Much grown in herb gardens for its wonderfully aniseed-scented leaves, but seldom escaping. Its seeds have the distinction of being the largest of any British herb (at 35mg, only a few tree seeds are heavier).

NVC: MG 1

East Berks: no records.

West Berks: a rare casual or garden escape. Purley (**RDG**) [67] in 1927, in a farm gate at South End [57] in 1953, in an abandoned garden at Hyde End Mill [56] in 1987. Atlas 2000: [28], [56], [57]

Sium latifolium L. *Greater Water-parsnip*

hel 7 ↓

River-, brook- and canal-sides on nutrient-rich mud. A local speciality, now enormously depleted by river traffic and bank-side development. Druce considered the plant to be “locally common, occurring at intervals all along the Thames”. By Bowen’s time it was “mostly in the Thames valley where it is local, rare and decreasing”. Now it is just plain rare. Riverside bays, protected from boat waves, need to be constructed to grow this and other bulky aquatic rarities.

NVC: S 4,18

East Berks: Reading, in the largest pond at the foot of Cookham Down, ditches by the Thames at Maidenhead, Wargrave, Sonning, Aston, Windsor (1805), very fine near Bolney and Shiplake. Owlsmoor (1963) and Cock Marsh (1956); confined to the Thames with one outlying site at Broadmoor; extinct at 5 out of its 7 sites. <1% (1km²). Atlas 2000: [88]

West Berks: confined to the Thames, and extinct at all but a handful of its original sites. By the canal near Wantage and Uffington [38], north of Harrowdown Hill [30], Marcham and very luxuriant at Abingdon [49], ditches by Radcot Bridge in 1805, Appleton, Harts Weir, Newbridge and the ditches below Wytham [40], ditches on Blewbury Common and Moulsoford [58], Radley, Culham, Sutton Courtenay and Wittenham [59], Kennington [50], Pangbourne (RDG) in 1926, Tilehurst, Sulham Woods (RDG) in 1930 and Tidmarsh [67], Wallingford [68]. Bowen had records from Wytham Meads [40] and Donnington Bridge [466687] in 1969. The best place to see the plant these days is just south of the Thames in Wytham Meads Ditches, centred on [465098], where there were four groups of plants in 2004, growing with *Oenanthe fistulosa*, *Samolus valerandi* and *Hottonia palustris*. Susan Erskine counted 15 flowering plants from Hagley Pool ditch [470450] on 8 August 2005. There were 51 plants in the ditch by Hagley Pool at Wytham on 7 August 2006 growing with 24 plants of *Ranunculus lingua*. Atlas 2000: [49], [40], [67]

Oenanthe lachenalii C.C. Gmel. Parsley Water-dropwort hs 6 ↓

A local speciality of rough water meadows, marshes by ponds on clay, fens and bogs, very local. Told from *O. pimpinelloides* by its unthickened rays and pedicels less than 0.5mm thick, and from *O. silaifolia* by the presence of bracts.

NVC: M 13,22; S 4,25

East Berks: no records.

West Berks: St Johns Lock [29], Buckland [39], Frilford Heath, Cothill fen (LAN), meadows by Noah’s Ark Inn, and Barrow Farm fen [49], from the saline spring at Marcham (RNG) [49] in 1962, Purley (RDG) [67] in 1926. Still at 3 sites around Cothill. Atlas 2000: [49], [40], [59]

Apium graveolens L. Wild Celery hs 6 ↓
Apium graveolens L. subsp. dulce (Miller) Lemke and Rothm., nom. inval.

Marshy meadows and brook sides, very local as a native plant. Saline ditch and waste places. Very local. Cultivated celery, *A. graveolens* var. *dulce* is a common garden and allotment crop, also found as culinary waste on tips. Celeriac, *A. graveolens* var. *rapaceum*, is grown for its swollen corms.

NVC: S 4,14,23

East Berks: there is a single record of var. *dulce* from Smallmead tip [7169] in 1971.

West Berks: a local speciality; south of Marcham [49] in 1881, and again in 1964 when there were about 100 plants. This celery-filled ditch is all that remains of the once-celebrated saline spring (one of Berkshire’s most unusual plant communities ; see p. 116). In 2000 there were about 200 plants left in the population at Manor Farm, Marcham [453960]. There were about 40 flowering plant and thousands of seedlings here in August 2006 (*Ashmolean Rare Plants Group* 2006 Newsletter). Also as a garden escape at Cumnor [40] in 1865. Other 20th century records include Abingdon [49] in 1921 (although this may be the Marcham site), Silchester and Padworth Common [66] but with no specimens. Swinford Meadow [40] in 1985. Atlas 2000: [49], [40], [66], [67]

Apium repens (Jacq.) Lag. Creeping Marshwort hel 7
Sium repens Jacq.
Apium nodiflorum (L.) Lagasca subsp. repens (Jacq.) Bonnier

A great rarity of damp places by rivers, generally flooded in winter. Associates include *Alopecurus geniculatus*, *Galium palustre*, *Glyceria notata*, *Juncus articulatus*, *Mentha aquatica*, *Myosotis scorpioides*, *Ranunculus flammula* and the ubiquitous *Apium nodiflorum*. Spreads by runners at, or just below, the soil surface. Told from *A. nodiflorum* by its

having more bracts (3-7 rather than 0-2) and the peduncles are longer than adjacent rays and petioles. DNA work shows that they are distinct species and that, at the famous Port Meadow site in Oxford at least, there are no hybrids.

East Berks: no records.

West Berks: a *Red Data Book* species, first collected by R.A. Finch at Chilswell Farm [4903] in 1962. Now known from Binsey Green [495076], where the population is being monitored each year by the *Ashmolean Rare Plants Group*. They found 6 patches in 1999 and 5 patches in 2000, all of them flowering (the missing patch may have succumbed to competition from *Carex riparia*). There were 80 flowers in the largest patch in July 2000, and 14 in August 2001. The population was very low in 2006 with no flowers found (Susan Erskine, personal communication), but the introduced population at North Hinksey had “masses of inflorescences” and the patch was evidently increasing in diameter as a result of recruitment from seed (*Ashmolean Rare Plants Group* 2006 Newsletter).

Torilis arvensis (Huds.) Link *Spreading Hedge-parsley* ○ th 7 ↓
Caucalis arvensis Hudson

A scarce plant in Britain, and a local speciality of dry arable fields, once frequent but now rare. It is an annual or biennial weed of winter-sown cereal crops on heavy calcareous soils, also found on waste ground in open, well drained situations. Poor dispersal, often found close to the parent plant. Susceptible to herbicides and a poor competitor in fertilized crops. Often found with *Euphorbia platyphyllos* and *Ranunculus arvensis*. The fruit has straight spines that are minutely hooked at the end (unlike the curved spines of *T. japonica*).

East Berks: “rather frequent especially on chalk soils” in Druce’s time but “local and uncommon” by Bowen’s. Wargrave, Marlow, Shinfield, Swallowfield, Sonning, Remenham, Hurley, Bisham, Cookham, Bray, Maidenhead, White Waltham, Windsor. Between Ruscombe and Waltham St Lawrence, Maidenhead, Cookham. Rare in the western section of the Thames valley between Reading and Hurley. 2% (1km²). Atlas 2000: [88]

West Berks: scattered on the eastern chalk around [58] with outliers at Kintbury [36], Membury airfield [37], Chaddleworth [37] and Harrowdown Hill [30]: Chilton [48], Blewbury and Cholsey [58], Appleford [59], Burghfield [66]. Found by Ian Curtis in an arable field margin at Swannybrook Farm near Kingston Bagpuize [408966] in 2002. Atlas 2000: [36], [37], [47], [48], [49], [56], [58], [59]

Torilis nodosa (L.) Gaertn. *Knotted Hedge-parsley* th 5 ↓
Tordylium nodosum L.
Caucalis nodosa Scop.

Dry sunny banks, pavements, and borders of fields on gravelly soil; local. It has very distinctive dimorphic fruits; one with spines and one tuberculate.

East Berks: Windsor, Cookham Green, White Waltham. Refound in Windsor on King Edward VII Avenue, just west of Windsor Road Bridge in 1998, growing out from the grass verge onto the concrete of the pavement. Restricted entirely to the Thames valley, and extinct at most of its former sites. <1% (1km²). Atlas 2000: [77], [97]

West Berks: formerly in the Thames valley from Kennington [50] down to Reading [67] and scattered through the Kennet valley, but extinct at most of its former sites. Wickham [37], Newbury (1986) [46], East and West Ilsley [48], Frilford Heath [49], Hill End Camp at Wytham (1987) and Boar’s Hill [40], between Hermitage and Newbury [56], Streatley and Riddle Hill (1977) [58], Didcot (2004) [59], Bagley Wood [50], Cothill and Englefield Park [67], Wallingford (1976) [68]. Extinct at many of its former sites. Atlas 2000: [29], [46], [49], [40], [58], [59], [67]

Centaurium pulchellum (Sw.) Druce *Lesser Centaury* th 6 ↓
Gentiana pulchella Sw.
Erythraea ramosissima Fries

A local speciality of dry sandy heaths on limestone, very rare. Told from *C. erythraea* by its annual habit (no basal leaf rosette at flowering time) and flowers with stalks (1-4mm) between the bracts and the base of the calyx.

East Berks: no records.

West Berks: confined entirely to limestone soils in the Northern Loop. Wytham [40] in 1946 (**OXF**) and in a cornfield south-south-west of Beacon Hill [40] in 1964 (**OXF**). Druce’s plant in (**OXF**) is an error for *C. erythraea*. Few recent records, but worth looking for around Stroud Copse [4407] and on Wytham Hill [4608]. Locally frequent on pulverised

fly ash at Pumney [519970] in 2001. In a small clearing near a pond on the Wasing Estate [5839 6358] in 2003; Bill Helyar found the plant in two nearby places in 2004, at [585637] and [588637].

Gentianella germanica (Willd.) Borner *Chiltern Gentian*
Gentiana germanica Willd.

hs 9

A local speciality of chalk grasslands. It is commonest on dry chalk downs on the northern escarpment, flowering very late in the summer (i.e. September–October). Scarce in Britain, this is a biennial reproducing by seed, found particularly in places where the soil has been disturbed by rabbits or off-road vehicles. Requires more shelter than *G. amarella* and is unable to withstand as much competition from other vegetation. A successful coloniser of bare chalk in chalk pits. Associates include *Anthyllis vulneraria*, *Euphrasia nemorosa*, *Gentianella amarella*, *Lotus corniculatus* and *Rhinanthus minor*. At risk from hybridisation with the more vigorous *G. amarella* (see below). Known by its large corolla (25-35mm rather than 12-22mm) which is more than twice as long as the calyx.
NVC: CG 2

East Berks: not recorded by Druce, but Bowen knew it from old chalk pits and open scrub at Hurley pit in 1964. <1% (1km²). Atlas 2000: [88]

West Berks: Inkpen Beacon [3562], Inholmes [3373] (**OXF**), Cleeve Hill [332765], Pit Down [3383], Rivar Copse [3562] (**OXF**), Wether Down Lambourn [3281], abundant at Letcombe Castle in 1897 (and 1991) flowering well after the *G. amarella*, Segsbury Camp [3884], Crog Hill and Gramps Hill [38], Upton [5186] in 1891 (**OXF**), Park Wood [5275], Streatley [5580] in 1937 (**OXF**). There were about 5,000 plants in flower on Gramps Hill [371844] on 25 August 2006 (Susan Erskine). Atlas 2000: [36], [37], [38], [57], [58]

Gentianella x pamplinii (Druce) E.F. Warb. = **G. germanica x G. amarella**
Gentiana x pamplinii Druce

A local speciality. The hybrid is intermediate in corolla shape, size and colour and is about 50% fertile. It occurs near most populations of *G. germanica* (see above). It was described as new to science by Druce who noticed it for the first time in 1891 growing with *G. amarella* and *G. germanica* on the earthwork known as Letcombe Castle [3884]. “In this locality a good deal of *G. amarella* continued to flower with *G. germanica*; usually it is an earlier flowering plant. The obconical tube of *G. germanica* fully distinguishes it from the nearly cylindrical tube of *G. amarella*. In this instance a few plants of a distinctly intermediate character were found; they had a longer and more conspicuous corolla than *G. amarella*, but the corolla was more cylindrical than in *G. germanica*; the pollen was defective, and the plant was distinctly intermediate. *G. germanica* is, I think, distinct from *G. amarella*. In addition to the above character, the leaves are broader than those of *G. amarella*, and the colour of the flowers is distinctly lighter, more blue than purple, and often lilac. It occurs more plentifully where the grass is very short and sparse” (Druce 1897).

East Berks: no records, but the plant should be sought at Hurley pit.

West Berks: Letcombe Castle [3884] in 1892, at the base of Rivar Copse (**OXF**) [3560] in 1913, Segsbury Camp (= Letcombe Castle) [3884] in 1956 (**OXF**), and Cleeve Hill SSSI [332764] from 1974-2004.

Gentianella anglica (Pugsley) E.F. Warb. *Early Gentian*
Gentiana anglica Pugsley
Gentianella anglica subsp. *anglica*

hs 5

A local speciality of short chalk grassland; local and very rare. This plant is scarce in Britain and has the distinction of being one of the very few English endemics. It is an annual plant of sparsely vegetated, base-rich, parched grasslands, on south-facing chalk downs, on ground that is kept short by grazing and trampling. Seed germinates in spring, and numbers fluctuate greatly from year to year, apparently buffered by the existence of a long-lived seed bank. Threatened by cessation of appropriate grazing, leading to proliferation of coarse grasses and scrub encroachment, but also by fertiliser pollution of grazed land. The molecular geneticists have not yet found any distinguishing DNA, so there is some doubt about the status of the plant, but its phenology is highly distinctive and its morphology is constant under common garden conditions. England has few enough endemic species, so let's not get rid of this one.

Known from the other two chalk grassland gentians as follows: *G. germanica* has a much larger corolla (25-35mm rather than 12-22mm), and *G. amarella* has more internodes (4-9 rather than 0-3), and the upper pedicel plus the uppermost internode is much less than half the total plant height (in *G. anglica* the top internode plus the top pedicel is usually much more than half of the total plant height). The relatively shorter apical pedicel of *G. amarella* also means that the pedicel of the apical flower is typically hidden by the calyces of adjacent flowers at the topmost node, whereas

the apical pedicel of *G. anglica* is typically visible and stands proud of the calyces of adjacent, shorter pedicelled flowers from the topmost node.

NVC: CG 2

East Berks: it has never been recorded from the eastern chalk (e.g. Hurley or Winter Hill). Since the plant seems to have retreated westwards in recent years, it is unlikely to be discovered here.

West Berks: in Druce as *Gentiana amarella* var. *praecox*; “the form which flowers much earlier in the year (i.e. May-July) occurs on Whitehorse Hill, Lambourn Downs and Ilsley Downs”. This is still a very good description of its distribution. Kingstone Down and Compton Beauchamp [28], Hackpen Hill, Lambourn Downs and Whitehorse Hill [38], Catmore and East Hendred Down [48], Churn, East Ilsley Down and Streatley Warren [58]. The current strongholds are on Weathercock Hill opposite Ashdown Park [2882] and on Whitehorse Hill [3086] in the bare chalky strips in the northern verge of the road from the disabled car park down to Dragon Hill and in short turf around the tail and back legs of the White Horse itself (Plate 2). Susan Erskine counted 112 plants on the south-facing flank of Weathercock Hill [288820] and Kingstone Down [286822] on 21 May 1999, and 525 plants on Whitehorse Hill [2986 and 3086] on 24 May 1999. George Osmond recorded the plant from Westfield Farm SSSI [355768] in “substantial numbers” in May 2000. There were 14 flowering plants on Hackpen Downs [355850] on 26 May 2006. Atlas 2000: [28], [37], [38]

Nymphoides peltata Kuntze *Fringed Water-lily*
Limnanthemum peltatum S. Gmelin, nom. illegit.

hyd 7 & • hyd 7

Native in still backwaters of the R. Thames and planted in ornamental ponds. A scarce plant as a native in Britain but widely planted. Both pin and thrum forms occur in the Thames Valley, which fact is used to argue that the plant is native here (in the East Anglian fens most plants are pin). Most of the plants I have seen have obviously been introduced as ornamentals (e.g. in Silwood Lake). Its characteristic associates are *Ceratophyllum demersum*, *Myriophyllum spicatum*, *Potamogeton crispus*, *P. pectinatus* and *P. perfoliatus*.
NVC: A 11

Silwood Park: locally abundant in Silwood Lake in 1979 on the eastern shore by the overhanging alders and in the aquatic part of the southern inflow. It was gone from these sites by July 2007, replaced by *Nuphar lutea*. Rare in the Lily Pond by the Manor House; declining over the period 1980-2001; not seen since then.

Ascot: in the pond to the east of Ascot Station (1971-2004).

East Berks: in the still pools of the Thames and ornamental waters; local. Ditches by Maidenhead, Bisham Wood, Wargrave, abundant near Park Place, between Wargrave and Shiplake. Whiteknights Park Lake (**RDG** and **RNG**), Bearwood (**LAN**) in 1956; extinct in most of its old Thames-side locations. Still present in ponds at Bearwood [7565], old gravel pits at Dinton Pastures [776725], Warren Row [8180], Cockpole Green [805811], Spout Pond [8163] and South Hill Park [8766]. Recently at Winnersh, Dinton Pastures, Savernake Park, East Bracknell, Hawlands Copse, Stud Green, Nobbscrook Farm. 2% (1km²). Atlas 2000: all except [78]

West Berks: Sutton Courtenay (**OXF**) in 1870, Purley Hall Park (**OXF**) in 1897. Extinct at most of the 12 stations on the R. Thames listed by Druce (e.g. Oxford at Isis (**OXF**) [50] in 1874). Still present at Aldermaston Park [5560] and Radley [522993]. Atlas 2000: [29], [40], [56], [59]

Solanum vernei Bitter and Wittm. *Purple Potato*
Solanum ballsii Hawkes

• h 6

Alien perennial from Argentina.

East Berks: a local speciality, thoroughly naturalised and locally abundant in shrubberies near the Halls of Residence on Reading University Campus at Whiteknights Park (Hora, 1995, *BSBI News* 68, 36). Thought to have been imported originally with dumped soil in 3 places [7371] in 1985 (**RNG**) (det. J. Hawkes). This is the only British station for this South American alien which has big (35-45mm diameter) purple potato flowers. As far as I can tell it is not a garden plant in Britain, so how its seeds came to be in the dumped soil remains a mystery. Now in several places down to Black Bridge and on both sides of the drive to Foxhill House. There is a large patch on the bank of the lake amongst alder and dogwood, and the garden of Foxhill Lodge has been all but taken over by the plant. <1 % (1km²). Atlas 2000: [77]

Browallia speciosa Hooker *Bush-violet*

• h 7

Shrubby perennials, woody at the base, native to Colombia. Flowers with a leathery calyx and corolla up to 5cm across, blue or deep purple with a white eye, illustrated in *Conservatory and Indoor Plants*, Vol 2, p 143 (Phillips and Rix, 1997).

East Berks: a local speciality which has been a weed since 1979 in the Botanical Garden at Whiteknights Park in Reading [7371] (RNG) (det. R. Rutherford). This is its only British station.

Cuscuta europaea L. *Greater Dodder*

p 8 ↓

A local speciality, growing as a parasite on nettles in damp thickets near streams, and on herbage along the banks of our larger rivers. Local and rather rare.

East Berks: parasitic on *Urtica dioica* by the R. Thames; local and in small quantity. Bulmarsh Heath, Clewer, Caesar's Camp, Winter Hill, Park Place boat house, almost smothering the hedge opposite the cottage at Hennerton chalk-pit [7880] on the Wargrave road, Old Windsor. Sonning, between Aston and Hambledon Lock, Maidenhead sewage works, Bisham wood, Cliveden reach, Windsor. Declining. Last seen at Crazies Hill in 1986. <1% (1km²). Atlas 2000: no records.

West Berks: extinct at most of its former stations, now confined to the eastern reaches of the R. Thames at Cholsey and Streatley [58], Little Wittenham reserve [59], Tilehurst [67], Wallingford [68]. Previously found in the Kennet valley at Wickham [37] and Newbury [46], and from further upstream in the R. Thames as at South Hinksey [50] and Abingdon [49]. Declining. Atlas 2000: no records.

Navarettia squarrosa (Eschsch.) Hook. & Arn. *Skunkweed*

• th 6

East Berks: a local speciality, and the only Berkshire alien to have its own paper in *Watsonia* (Clement et al., 1993). Introduced unintentionally with wildflower seed, when the appallingly mismanaged tip at Manor Hill [9569] within Windsor Great Park was finally tidied up. The site was bulldozed and landscaped in 1989. In July 1990, there were several thousand plants thickly scattered on more or less bare sandy ground. The site had been sown the previous autumn with a wildflower mix, the seed of which originated in Oregon, USA. Most of the seeds had failed, and the *Navarettia* was growing with a scattering of *Spergularia rubra* and *Gnaphalium uliginosum*. In 1991 the *Navarettia* and *Plagiobothrys scouleri* (also, presumably, in the seed mix) were present but in lower numbers. A few plants survived to July 1999, by which time the original site was overgrown, but new bare ground nearby had been colonised; this ground had been kept open by turning forest trucks. <1% (1km²).

West Berks: a small group of plants on the line of the former runway on Greenham Common [507644] in June 2001.

Nonea lutea (Descr.) DC. *Yellow Nonea*

• th 3

Silwood Park: a local speciality of open bare ground and sunny brick walls (Plate 15). Long established, thoroughly naturalized and resilient to repeated attempts at eradication by Philistine gardeners who don't know a good alien when they see one. Growing with *Briza maxima* on the cinder pot stand behind The Greenhouses (1970-2004). The original population was on compacted ground by the door at the end of the eastern greenhouse. This population was gone by March 1995, but a new population appeared on the opposite side of the pot standing in the angle made by the potting shed and the western greenhouse [9449 6851]. This population has expanded and was abundant, and flowering superbly in April 1996 around all of the sunny wall-bases. The population was herbicided and very poor in March 1997 but was fully recovered by 1999. A new, *Nonea*-friendly regime of weed management is now in place, with weed removal and soil disturbance in mid summer (after seed set) but no herbicides. Under this new, friendly management regime the plant declined to the verge of extinction by September 2007! There was just one flowering individual in 2007, the rest swamped by *Plantago lanceolata* and *Holcus lanatus*. So much for friendly management. There population was gone by April 2008 but the plants were thriving untended inside the derelict greenhouse on the opposite side of the wall. There was a significant range expansion when 30 plants came up on North Gravel, over 400m to the north, on bare ground created when the Leyland cypresses were felled in 1999; the first flowers from these plants appeared on 9 March 2001, but the population was gone by 2003.

East Berks: no other records.

West Berks: no records.

Hippuris vulgaris L. *Mare's-tail*

hyd 6 ↓

A local speciality of slow streams, canals, ponds and ditches and muddy margins of larger rivers. Local and uncommon.

NVC: A 7,8,11,21; S 4

East Berks: local in broad ditches in Sonning meadows and at Maidenhead. Not seen by Bowen, and no Atlas records. In still occurs, however, in willow-shaded ponds at Cock Marsh (1999-2004). <1% (1km²). Atlas 2000: [88]

West Berks: occasional in the Kennet valley, rare in the Thames valley and absent elsewhere. Kintbury [36], Buckland Park [39], Hamstead Marshall, Newbury and Greenham [46], Wytham and growing through *Menyanthes trifoliata* in the pond at Jarn Mound in 2002 [40], Thatcham and Woolhampton [56], Hermitage and Stanford Dingley [57], Cholsey [58], Sutton Courtenay [59], Kennington [50], in the R. Pang at Bradfield [67], Wallingford [68]. Atlas 2000: [36], [39], [46], [40], [56], [57], [58], [59], [50], [67], [68]

Littorella uniflora (L.) Asch. *Shoreweed*

hyd 6 ↓

Littorella juncea

Plantago uniflora L.

A local speciality found on the margins and floors of shallow acid ponds in south-east Berkshire; very local and rare. "Not infrequent in the south of the county; abundant near Reading, Virginia Water (1871), near Wellington, Long Moor, Ascot" (Druce). Bowen considered it "local and decreasing". Now just plain rare.

NVC: A 8,9,10,11,22,23; OV 31,35; S 13,19

Ascot: there is a patch in the south-east corner of Englemere Pond [9068]. This may well be the largest surviving population in Berkshire; 5 August 1996, still there in 2002.

East Berks: Kings Mere (1948), in a zone half-way along the north-east shore of Heath Lake (1961 and still there), South Lake (1965), Sandhurst (1962), Finchampstead (LAN) in 1956, Rapley Farm (1988). Rediscovered at 3 of these stations. <1% (1km²). Atlas 2000: [76], [77], [86]

West Berks: confined to acid heaths in [56] and [66]. The only recent record is from Wokefield Pond [652662] in 1984 and 2001. Formerly at Aldermaston Decoy and Bucklebury Lower Common [56], Hermitage [57], Mortimer and Burghfield Common (RNG) [66]. Atlas 2000: [66]

Verbascum virgatum Stokes *Twiggy Mullein*

• hs 6

A Silwood speciality of open waste ground, short grass, railways, forest tracks, sandpits. It is scarce as a native plant in Britain, where it is confined to Cornwall and Devon. Formerly a common escape from gardens, but now little cultivated. It has high seed production and a long-lived seed bank, so it can grow abundantly following soil disturbance, even though it was many years since the flowers were last seen at a site. Told from *V. blattaria* by the very short pedicels (shorter than the calyx), more than one flower per node, and the plant has stalked glands throughout.

Silwood Park: this is our commonest Mullein in most years. It is monocarpic (it flowers once then dies), and comes up from a large seed bank in numbers that vary greatly from year to year, depending upon the precise amount and timing of soil disturbance or removal of shade. On the compacted aggregate of the church car park at Ashurst, in rabbit grazed turf in the churchyard, and on the mossy graveyard paths (1979-2007). On dry disturbed ground around the Greenhouses and on the pot standing, South Lodge, formerly abundant in the (then) heather bed that separated the Cannon Path from the Croquet Lawn (1981-92 fluctuating widely in abundance from year to year), this population was down to 1 plant in July 2002 after the bed had grassed-over (Plate 15), Reactor Block, Buckhurst Road Entrance, Hayes Wood, Science Park, East Lodge. An enormous plant, prostrate to the ground for the first 1m, then bent vertically for more than 1m, just west of the main entrance to North Block in summer 1990. Another plant reached 2.5m in August 1994 at the base of the wall at West Block but apparently left no progeny. There were 25 plants by the Water Tank in June 2000 coming up from disturbed soil where the fibre optic cables had been laid, but they were gone by 2001. Cocoa Greenhouses, with *V. blattaria*, in June 2000. Common as recruits that came up from the seed bank after the Leyland Cypresses on North Gravel were felled in May 2000; these plants flowered and died in July 2001, with none seen since then. There were 12 plants in flower by the gate into Ashurst Warren on 1 September 2003. A group of 6 big plants in gravel by the CABI Polytunnel in June 1004.

Ascot: local and rare. On rubble of the demolished mansion at King's Beeches [934668] on 1 December 2003 growing with *Datura stramonium* and *V. thapsus*.

East Berks: not in Druce. Rare casual in dry waste places. Reading building site (**RNG**) in 1959, Wellington College (1962). Recently at Lines Road and Wellington College. <1% (1km²). Atlas 2000: [77], [86], [96]

West Berks: Newbury race course [46], waste ground at Abingdon [49], North Moreton [58] (**OXF**). On disturbed ground at Kingston Bagpuize [4098] in 2003. Atlas 2000: [58]

Scrophularia umbrosa Dumort. *Green Figwort*

hp 7

A local speciality that is plentiful on both sides of the stream by the watercress beds of Shalbourne Stream near Standen Manor, close to the Wiltshire border (see Plate 16). This is very cunning, because a single plant population gets to contribute to the biodiversity of two different counties. Note that the modern county boundaries are different from the boundaries of v.c.22 in this corner of Hampshire, Wiltshire and Berkshire. Told from *S. auriculata* by its bifid staminode with two diverging lobes at the apex (the staminode of *S. auriculata* is entire and orbicular), serrate not crenate leaf margins, lack of paired basal leaf lobes, and by the fact that the inflorescence is interspersed with leaf-like (not narrow, scale-like) bracts.

West Berks: not in Druce. Stream banks on calcareous, nutrient-rich mud by the Shalbourne Stream; confined to [36]. On a stream bank at Shalbourne on the Wiltshire border [316636] in 1987, and at East Court [320647] (1965) and Standen Manor [325663] (1948). The edges of the old watercress beds were badly overgrown by nettles in 2001, but the plant is still found on the streamside between Shalbourne and Standen Manor [317643] (1979-2004; Plate 16). Atlas 2000: [36]

Scrophularia vernalis L. *Yellow Figwort*

• hp 4 ↓

A local speciality of heaths and bushy places that is told from all the other figworts by the absence of a staminode, and by the equal size of the corolla lobes (they are not organised into upper and lower lips). The flowers are yellow not brown.

East Berks: very rare in plantations, hedge-banks and gardens; rare and sometimes sporadic. Reading University (1953 and 1966). Bonfire site in Whiteknights Park (1978); still in Whiteknights in 2003. <1% (1km²). Atlas 2000: [77]

West Berks: very local on Bucklebury Upper Common at the boundary of [56] and [57]. Newbury [46], Woolhampton and Aldermaston Court [56], Marlston [57], and recently (1987) in a small wood north of Bucklebury next to New Barn Farm [552712] and in the hedge of Little Acres, The Slade [533700]. Locally frequent in the woodland garden and scattered in the herbaceous borders at Kingston Bagpuize House [407979] in April 2001. Atlas 2000: [56], [57], [66]

Linaria x sepium G.J. Allman = **L. vulgaris x L. repens**

This is something of a local speciality. As evidence of the hybrid origin of these plants, Druce points out that until 1890 the only plant to be found in Oxford was *L. vulgaris*. "About that date a space of ground between the Great Western and the London and North-western Railways was filled up with chalk rubble which had been brought from the chalk district of Berkshire near Upton. With the chalk, the seeds of many chalk plants were introduced. In the year 1890 the chalk was covered with a profuse growth of *Iberis amara*, *Picris hieracioides* and less plentifully with *Thymus*, *Daucus*, *Linaria repens*, *Centaurea nigra*, *Verbascum thapsus*, *Campanula glomerata*, *Festuca rubra*, *Bromopsis erecta*, etc. *Linaria vulgaris* which had previously existed in the vicinity, was also common, but no hybrids were seen that season. In the following year, however, hybrid plants occurred in great quantity [and by 1892] an almost unbroken chain of intermediates between *L. repens* and *L. vulgaris* could be found" (Druce). The corolla is typically pale yellow with violet veins and intermediate in size and shape compared with the parents. Plants are fertile and can form hybrid swarms in which plants close to either parent can be found.

East Berks: Druce knew the hybrid from south of the Thames "near Henley". Railway banks and waste places. Reading (**RNG**) in 1987. Wargrave (1963), Cookham railway (1958).

West Berks: pre-1897 records from Upton and Moulsoford Downs [58], Didcot [59], and Reading [77]. Recent records (mostly from the railway) from Enborne [46], east of Bulls Lock [56], Moulsoford and East Hagbourne [58], heaped ballast at Didcot Station [59], South Hinksey (**RNG**) and Kennington [50], Sulham (**LAN**), Nunhide Lane and Basildon [67]. Atlas 2000: no records.

Odontites jaubertianus (Boreau) D. Dietr. ex Walp. *French Bartsia*

• th 6

Euphrasia jaubertiana Boreau

Odontites luteus sensu Bowen, non (L.) Clairv.

Odontites jaubertianus subsp. **chrysanthus** (Boreau) P. Fourn.

Odontites chrysanthus Boreau

A local speciality of short heathy turf. These are its only British stations.

West Berks: long established on a gravelly heath at AWRE Aldermaston [584629] (RNG) but it is not known how the plant got there. It was abundant in the 1960s but is now much reduced (down to 16 plants in 1988 at [600645]). A single plant was found by Wasing Wood [584629] in 1983. Also known from a lay-by on Burys Bank Road by Bowdown House north of Greenham Common [501653] (RNG) between 1970 and 1976, but not seen since. All these sites were searched in August 2005, but the plant was not found.

Galium pumilum Murray *Slender Bedstraw*
Galium sylvestre Poll.
Galium apserum Schreb.

hp 6 ↓

A local speciality of herb-rich chalk grassland, thriving at sites where the turf is grazed, mown or kept short and thin by exposure. Associates include *Cirsium acaule*, *Gymnadenia conopsea*, *Helianthemum nummularium*, *Hippocrepis comosa* and *Polygala calcarea*. Destruction of chalk grassland for arable agriculture and cessation of grazing on what little grassland remains has undoubtedly caused considerable losses. Told from *G. sternerii* (not a Berkshire plant) by the surface of the fruit which has minute, low-domed or rounded tubercles (not high-domed, sub-acute tubercles). Told from *G. saxatile* (an extremely common Berkshire plant) by the leaf margins. The prickles are all forward directed in *G. saxatile* but at least some of the prickles are backward directed in *G. pumilum*. The leaves on the flowering shoots are also different shapes: fatter (oblongate) in *G. saxatile* and more slender (linear to linear elliptic) in *G. pumilum*. The overall jizz is distinctive, too, because *G. pumilum* is an upright (not creeping) plant.

East Berks: very local on the chalk at Hurley pit (1965) (det. R.S.R. Fitter). Old Windsor (HULL) in 1879. Atlas 2000: no records.

West Berks: very local near Sulham [67]. Found by Mr. Tufnail on “a grassy slope on which the prevailing vegetation consists of *Galium mollugo*, *Gentianella amarella*, *Asperula cynanchica*, *Campanula glomerata*, *Bromopsis erecta*, *Helictotrichon pubescens*, etc. A few larches have been planted in the vicinity, and there is a patch of *Euphorbia cyparissias* on the same slope, but it is not very near to the *Galium*, which I am disposed to think may be a native species here” (Druce 1897). Frilford Heath golf course (OXF) [49] in 1912, Sulham [67] again in 1954 (see above), in calcareous grassland on Wytham Hill [40] in 1961. There are no specimens of most of these. Atlas 2000: [38], [40]

Galium parisiense L. *Wall Bedstraw*

th 6 ↑

A small annual plant of ancient walls and bare places, typically growing with *Arenaria serpyllifolia* subsp. *leptocladus*, *Catapodium rigidum*, *Erophila verna*, *Sagina apetala*, *Saxifraga tridactylites*, etc. Autumn germinated plants are likely to be killed by frost, and spring germinated plants are extremely sensitive to competition from more vigorous perennials, especially under nutrient enrichment. Told from other bedstraws by its slender stature, smooth fruits and leaf margins with forward directed prickles. Probably extinct as a native, but persists as a casual introduction, and appears to be undergoing something of a renaissance.

Silwood Park: a fine plant, growing on its own in dry bare soil at the base of the wall of the Centre for Population Biology between the brickwork and the edge of the lawn on 29 June 2000. Origin unknown. Opposite the *Cornus nuttallii* at the North Block end of the CPB building [9471 6865]. More than 30 plants in June 2001, the offspring of which germinated in September 2001; they survived the frosty winter of 2001-02, and the population was in good shape in June 2002, having spread around the corner of the building into cracks between the brick paving stones. By May 2004, the whole corner was dominated by a monoculture of *G. parisiense*, there having been no serious frosts, and equally abundant in April 2005. Cut down while in flower by an untutored gardener in July 2006, but it survived and seedlings were common after late August rains on 25 August 2006. The population was very sparse on 26 August 2007 with only a few plants germinated, and much bare ground, but a reasonable seed crop had been set in July 2007. Very little to be seen in December 2007, and only a sparse coverage of young plants in April 2008.

East Berks: Silwood Park, new to v.c.22 in 2000. <1% (1km²).

West Berks: there is a pre-1970 record from [57] in the Scarce Plant Atlas, but I can not find any details of it. Found by Bill Helyar in June 2001 on a topsoil dump on Tadley Common [605626].

Chamaemelum nobile (L.) All. *Chamomile*
Anthemis nobilis L.

h 6 ↓

In the short turf of heathy commons and in lawns; local and rare in south-east Berkshire. Scarce in Britain in herb rich closely grazed moderately acidic, unfertilized lowland grassland and sports grounds on dry sandy or gleyed soils that are baked hard in summer; often found with *Plantago coronopus*. The main cause of its decline is thought to be cessation of grazing on heaths. An aromatic perennial with finely divided leaves told from the other similar genera like *Matricaria* with white rays and yellow disc florets by the presence of receptacular scales, and from *Anthemis* by the small pouch at the base of the corolla which hides the top of the ovary in one plane.

Ascot: no recent records.

East Berks: Wellington College (**RNG**) in 1915, Virginia Water, Knowl Hill, Windsor, Earley, Hurst, Riseley Common, Bracknell, Stubbing's Heath, plentiful and luxuriant near the brickyards at Twyford. Much reduced by Bowen's time. Fifield (1954), Coleman's Moor (**RNG**) in 1956. Formerly scattered throughout, but extinct at most of its stations. Leighton Park (1982) and South Hill Park [8766] in 1985. It has the distribution of an alien these days. 1% (1km²). Atlas 2000: [77], [86]

West Berks: very local and rare. Grazeley, Mortimer (**RNG**) and Padworth Common [66]. Atlas 2000: [46]

Cirsium dissectum (L.) Hill *Meadow Thistle*

hel 6 ↓

Carduus dissectus L.

Cnicus pratensis Willd.

A local speciality of fens, bogs, peaty commons, moist meadows and wet heaths where there is some horizontal water movement, often growing with *Molinia* and *Carex panicea*. The lower stem leaves are unlobed, and chalky white-felted on the underside. A serious decreaser as a result of drainage of bogs and wet heaths. Absent from the chalk and northern clays.

NVC: M 13,16,21,22,24

Ascot: thought to be extinct in Sunningwell Bog and Ascot. Rediscovered on 28 June 2001 on the edge of Sole's Pond in the woodland just east of Ascot Station, a single plant on the bank opposite the island.

East Berks: Earley Heath, Bulmarsh, Bagshot Common, boggy ground in Windsor Great Park, near Caesar's Camp, Wellington College, Ambarrow, Long Moor, Sandhurst, Crowthorne, Wokingham, near Bracknell, Riseley, Finchampstead, Blackwater. Wellington College (1916), Queens Mere, Owlsmoor. Extinct at most of its former stations, but still at Edgebarrow, Wellington College Bog, Shepherd Meadow [8460], Wishmoor Cross [8763], Crowthorne [8463], water meadows in v.c.22 opposite Blackwater Station [8559], near Mill Pond [8865], and on Whitmoor bog [8968]. 1% (1km²). Atlas 2000: [86]

West Berks: Fernham meadows and Grafton Lock meadows [29], Alfred's Hill [2990], Inkpen Common and Woodhay [36], Newhouse Covert [39], Enborne and Greenham Common [46], Snelsmore Common [47], Frilford, Tubney, Tubworth Barn meadow, Barrow Farm fen and Cothill Fen [49], Wytham and Hen Wood [40], wet meadow at Aldermaston [5970 6269] and Cold Ash Common [56], Oare Common and Bucklebury [57], Hagbourne Marsh [58], Iffley meadows, Bagley Wood and Kennington [50], Ufton Nervet, Burghfield and Mortimer [66]. The population on Inkpen Common is particularly strong, and grows amongst abundant *Narthecium ossifragum*. Atlas 2000: [29], [36], [39], [46], [47], [49], [40], [56], [57], [59], [50], [66]

Cirsium x forsteri (Sm.) Loudon = **C. dissectum x C. palustre**

Cnicus x forsteri Smith

This is the commonest hybrid thistle and is found wherever *C. dissectum* grows. It has discontinuous spiny-winged, cottony pubescent stems and intermediate capitula and leaves.

East Berks: Wellington College [86] from 1963-65, Long Moor [76] in 1897.

West Berks: Cothill [49] in 1918.

Hypochaeris glabra L. *Smooth Cat's-ear*

th 6 ↓

A local speciality of open sunny spots on sandy and gravelly heaths. Very local and rare. The marginal achenes are not beaked, the capitula are small (1.0-1.5cm across rather than 2-4cm), and the ligules are dumpy (only 2 times as long as wide, not 4 times as in *H. radicata*).

Ascot: extinct. Formerly at Englemere, by the railway between Bracknell and Ascot.

East Berks: extinct. No post-1920 records; last recorded from the Berkshire side of Virginia Water in 1918. Wellington College, Ambarrow, Whitmoor Bog, Bracknell, Virginia Water. The Atlas shows post-1930 records from [76], [96] and [97]. The [76] record is from North Hampshire (v.c.12) just south of the Berkshire border from a cornfield by the ford at Riseley in 1957 (Brewis, Bowman and Rose, 1996). The two eastern records are from adjacent tetrads on the Surrey border [9668] and [9670] and may in fact be just a single site on the eastern side of Virginia Water. Well worth searching for, because it is easy to overlook it as a small *H. radicata*. Atlas 2000: no records.

West Berks: one of our native rarities, at Buckland [39], sandy waste ground at Frilford pit [4497], sandy arable land at Cothill [4699], in short turf on sandy ground on the hill top at Cumnor Hurst [4704]. Atlas 2000: [39], [49], [40]

Pilosella praealta (Vill. ex Gochnat) F.W. Schultz and Sch.Bip. • h 6
Hieracium praealtum Villars ex Gochnat
Hieracium magyricum Naeg. & Peter subsp. thaumasium Peter
Hieracium arvorum (Naegel and Peter) Pugsley
Hieracium spraguei Pugsley
Hieracium praealtum Villars ex Gochnat subsp. thaumasium (Peter) Sell
Pilosella thaumasia (Peter) Dostál
Pilosella praealta subsp. **thaumasia** (Peter) P.D. Sell *Tall Mouse-ear-hawkweed* • h 6

A local speciality. Still in the location where it was first recorded as new to Britain in 1918 by Mr C.P. Hurst (see below, and p. 83). It is very distinctive with its tall stems, long stolons, multiple small flower heads, and leaves with sparse but very long, dark, stiff hairs on their upper surface.

West Berks: introduced on a tall, north-facing brick wall on the railway at Hungerford [338686], just east of the High Street, where it has been known from 1918 onwards (**BM** and **OXF**). It is not clear whether it was introduced accidentally or intentionally. At its peak, about 1000 plants grew here at one of its few British localities. The plant is still frequent (c.100 plants) on the shady brickwork of the high wall facing the supermarket car park (1979-2004); see photo on rear cover. On 23 September 2006 the plant was much reduced, even though other rarities like *Adiantum* were frequent all along the wall. The *Pilosella praealta* had gone from the vertical face of the wall, and was now restricted to the brick ledge, 1.5m below the top. I fear that the *Buddleja* is becoming so abundant that the whole wall will be stripped of its plants when the *Buddleja* is removed.

Hieracium virgultorum Jord. h 7

Told from *H. sabaudum* by its involucre bracts, which are almost hairless and almost all of the hairs are glandular (i.e. it lacks pilose and non-glandular hairs). Often inconspicuous, because roe deer eat the flowering stems, even inside rabbit fences.

Silwood Park: a local speciality, discovered on "Heaths in Silwood Park, rare" by Tony Dixon (1956) (**OXF**). He can not remember the exact location, but two clumps of plants were found on Guinness's Hill, in *Holcus mollis* grassland, close to the grass track up to Nash's Field, near to the large, spreading oak (tree number 11) on 10 August 1980. Disappeared from this location, but reappeared after a 9 year absence 25 August 1989, 15m further up the slope, inside the rabbit fence erected as part of V.K. Brown's insecticide experiment. Especially good flowering in 1990, when the rabbit-protected plants flowered in about 20 clumps within the fence. There were 5 plants in 2002 and 6 in 2004 from regrowth shoots. These plants are 1m tall, typically in clumps of 5 shoots; stem almost glabrous, eglandular, even below; 16 leaves below the first flowering branch; 15 major flowering branches, each with 5 heads; leaves with 2-4 prominent linear teeth at the base, hairy only on the veins beneath; involucre 12mm, olive green, almost glabrous but with a central line of sparse, glandular black-based hairs; styles discoloured; heads up to 35mm diameter; peduncles with dense stellate hairs but no glands; all leaves short stalked to sessile with lobed bases; ligules glabrous. Locally frequent in September 2002 in several places in the western parts of Silwood Bottom, where tall grassland had developed following cultivation in 1998; these plants had 38 leaves below the first flowering branch. Two plants on 10 September 2005 inside a small new grazing enclosure, erected in spring 2003, to the southwest of the main Guinness's Slope enclosure.

Ascot: on banks near the cricket pavilion on Ascot Heath in 2002.

East Berks: no other records but worth searching for in long grass in later summer.

West Berks: between Tilehurst and Sulham (**RDG**) [67].

Filago pyramidata L. *Broad-leaved Cudweed* o th 7 ↓

Filago spathulata auct., non C. Presl

Another *Red Data Book* species of arable land and other habitats that have a long history of disturbance, formerly known from more than 100 hectads in Britain. Of the 8 surviving English sites, 3 are on arable land growing with *Filago minima* and *F. vulgaris*, 3 are in chalk quarries growing with *Cerastium pumilum* and *Iberis amara*, and 2 are on chalk spoil by railway lines (see *F. lutescens*, above). The *Red Data Book* records all our Berkshire populations as extinct. The extant record for [77] is from Sonning Eye chalk pit in Oxfordshire (v.c.23) [7476] where the plant has been collected repeatedly since 1870 (Killick, Perry and Woodell, 1998). Note, however, that several reintroduction programmes are currently under way in Berkshire, so this position may change. The plant has many (10-40) capitula in each cluster, and the capitula are overtopped by 2-5 apical leaves; the whole plant is white woolly (not yellowish) and the tips of the bracts recurved and yellowish (not reddish and erect).

NVC: OV 15

East Berks: extinct. Pre-1900 records from Wargrave, Coleman's Moor, Stubbings Heath, Knowl Hill, and Maidenhead Thicket. Formerly known from 4 sites on the chalk in the north-west, and from Maidenhead Thicket, but not seen this century. Atlas 2000: no records.

West Berks: close to extinction but reintroductions are under way. Formerly in the Northern Loop at Cothill [4699] in October 1922 (**OXF** and **RNG**), and between Cothill and Frilford [4598] in 1954. Seeds were sown experimentally in Dry Sandford Pit in autumn 2000 but came to nothing. There used to be two outlying stations. At Pusey [341959] in 1961, at Buckland Warren [39] in 1966, and again from the corner of a sandy arable field [333962] in 1977. When the golf course was built, this piece of ground was kept under cultivation in an attempt to ensure the survival of the Cudweed (it was made an SSSI in 1992). There were 20 plants at [334963] in August 2002, 120 in 2005 and 80 on 30 June 2006 (counted by Susan Erskine). There is a record of the plant growing with *Lathyrus aphaca* between Moulsoford and Sreatley [580833] in 1962, but this record is not supported by a specimen. Atlas 2000: [39]

Potamogeton coloratus Hornem. *Fen Pondweed*

hyd 6

A local speciality of shallow pools in base-rich but nutrient poor pools (its headquarters are in the fens of East Anglia). Susceptible to atmospheric eutrophication, even in nature reserves like Cothill Fen. Grows with *Chara hispida* and *Utricularia neglecta* (the Cothill record for the latter species is unconfirmed, but well worth looking for).

NVC: A 5; M 13

East Berks: no records.

West Berks: pools of stagnant water in boggy places in calcareous fens, very local. Cothill fen (**RNG**) [4698] and Cothill pit [466995], Barrow Farm Fen [469977] and the pond in Dry Sandford Pit [467966]. Atlas 2000: [49]

Potamogeton nodosus Poir. *Loddon Pondweed*

hyd 8 ↓

A local speciality and *Red Data Book* species that grows in calcareous and moderately eutrophic rivers in both shallow and relatively deep water, where the flow is relatively rapid and the water is well aerated (e.g. downstream of weirs and sluices). Associated species include *Elodea nuttallii*, *Lemna minor*, *Myriophyllum spicatum*, *Nuphar lutea*, *Potamogeton crispus*, *P. pectinatus*, *Sagittaria sagittifolia*, *Schoenoplectus lacustris* and *Sparganium emersum*. Most leaves submerged with petiole at least half as long as blade, floating leaves cuneate (not rounded or cordate).

NVC: S 4

East Berks: discovered as new to Britain by Druce in 1893. Locally frequent in R. Loddon, occasional in the lower Thames. All the way from Stanford End to Wargrave, Hurley, Bisham, Cliveden reach (**BIRM**) in 1930, Hurley Lock (**BM**) and Bisham (**BM**) in 1940. It is also known pre-1940s from the R. Thames at Shiplake Station, Hurley, Bisham, Cliveden reach (**OXF**). Not seen since 1941 in the Thames, presumably as a result of eutrophication and boat traffic. Still at several stations in [76] and [77] along the eponymous R. Loddon, including Stanford End Mill (**LAN**), Swallowfield, Kings Bridge [716648], Moor Copse Arborfield, Shinfield (**OXF**), Earley, Sindlesham Mill (**RNG**), Winnersh, Woodley (**RNG**), Sandford Mill, Whistley Mill (**OXF**) and Chervil Farm. Found in July 2002 in the R. Thames at Wargrave [779797], but the detached leaf could easily have floated down from the nearby Loddon Mouth. < 1 % (1km²). Atlas 2000: [76], [77]

West Berks: no records.

Potamogeton lucens L. *Shining Pondweed*

hyd 6 ↓

Rivers, canals and ponds, in flowing calcareous water. Once abundant, as Druce reports: “abundant and generally distributed in our larger streams”, but “only locally frequent in clear water” by Bowen’s time. All leaves petiolate, and more than 12cm, petiole unwinged near base.

NVC: A 2,11,15; S 8

East Berks: Woodley (**LAN**) in 1959, Swallowfield, Sandford Mill, Loddon, Maidenhead, Cliveden reach. Rare in the R. Loddon (**OXF** and **BM**) and extinct in the R. Thames north of Maidenhead (**BM**, last seen in 1949). J. E. Dandy made many collections from the Thames between 1932 and 1940 (**BM**). < 1 % (1km²). Atlas 2000: [76], [88]

West Berks: occasional in the R. Kennet and the Kennet and Avon canal from Hungerford [36] (**BM**) down to Reading [67], and in the Thames from Wytham [40] to Abingdon [59]. St John’s Lock at Buscot (**BM**) [2298] in 1965, West Hagbourne Moor [58] in 1992, Ufton Bridge (**BM**) [6168] in 1940, Basildon (**BM**) [6179] in 1938. Atlas 2000: [46], [40], [56], [50]

Potamogeton x salicifolius Wolfg. *Willow-leaved Pondweed* = **P. lucens x P. perfoliatus**

East Berks: from the Thames in Reading (**RNG**) in 1921, but not seen since.

West Berks: in the Kennet and Avon canal at Hungerford [36], Newbury [46], Sulhamstead [66] and Burghfield and Theale [67], and from the R. Kennet at Ufton Bridge [6168] all with specimens (**BM**) from the 1940s but not seen recently.

Potamogeton alpinus Balb. *Red Pondweed*

hyd 6 ↓

Slow rivers and lakes, uncommon. Streams, pools and ponds; rare and local. Leaves narrowed, not clasping; stem round, all leaves with more than 7 veins.

NVC: A 11

East Berks: Before 1900 it was found in the R. Loddon from Stratfield Saye (**OXF**) [7062], past Shinfield (**OXF**) [7468], Sandford Mill (**OXF**) [7873] to Loddon Bridge at Twyford (**BM**) [7876], Virginia Water (**OXF**) in 1893. Last seen at Shinfield in 1933.

West Berks: where the R. Cole meets the R. Thames at King’s Bridge, Buscot [2397] (**OXF** and **BM**) in 1947 but not seen since then.

Potamogeton praelongus Wulfen *Long-stalked Pondweed*

hyd 5 ↓

Potamogeton salicifolius auct., non Wolfg.

A local speciality, growing in rivers and canals in water at least 1m deep (it can be dominant at depths below 1.5-3m), often found with *P. perfoliatus*. Declined dramatically since 1950, probably as a result of eutrophication. Some leaves rounded, more or less clasping, stipules conspicuous (>1cm), leaves > 10cm.

NVC: A 11

East Berks: in the Thames at Bisham (**BM**) in 1873, Aston Ferry, Hurley, Bray. “R. Thames and its backwaters; local and decreasing” (**BM**) (Druce). Extinct in the R. Thames, last seen at Wargrave in 1944 (**RNG**). Never recorded from the other river systems.

West Berks: at Appleton Lower Common, Wytham meads, South Hinksey (**BM**) and Kennington. Extinct in the Thames from Abingdon [59] down to Reading [67], and at its two former stations in the interior from the Wiltshire and Berkshire canal at Wantage [48] (**OXF**) and Uffington [38] where it was known before 1900; Abingdon (**K**) [49] in 1882. Never recorded from the Kennet valley. Last seen at Kennington [5203] in 1973.

Potamogeton perfoliatus L. *Perfoliate Pondweed*

hyd 6 ↓

Ponds, rivers, ditches, canals and streams in clear calcareous water; “common and widely distributed” in Druce’s time but “now much reduced” (Bowen). Stipules inconspicuous, stem round, leaves more than 2cm wide.

NVC: A 8,10,11,12,15,23; S 8

East Berks: Cookham Reach (**BM**) in 1899, Reading, Whistley Mill. Only ever recorded from the vicinity of Reading. Last noted from a eutrophic stream at Smallmead (1972). < 1 % (1km²). Atlas 2000: [76]

West Berks: in the R. Cole [204976], Inglesham [29], the canal at Hungerford (**BM**) [36], Enborne and Newbury [46], in the R. Lambourn at Hunts Green south of Boxford [434702], in the Wiltshire and Berkshire canal at Abingdon (**OXF**) [49] in 1892, Newbridge [40], canal at Aldermaston [56] (**LAN**), Streatley (**BM**) [58], Radley [59], South Hinksey [50], Burghfield (**BM**), Aldermaston Wharf and Sulhamstead [66], Pangbourne, Theale, Calcot, Purley and Basildon [67]. Atlas 2000: [29], [46], [47], [40], [56], [50]

Potamogeton friesii Rupr. *Flat-stalked Pondweed* hyd 6 ↓

Ponds, canals and shallow streams with calcareous water; local. Still or slow moving water, growing with *Ceratophyllum demersum*, *P. crispus*, *P. pectinatus*, *P. perfoliatus*, *P. pusillus* and *Ranunculus circinatus*. Worth looking for as a colonist of flooded gravel pits. Stems not fan-like; leaves less than 3.5mm wide, entire and mucronate. NVC: A 11

East Berks: extinct; only ever known from a single station at Cookham (**OXF**) in 1901. Atlas 2000: no records.

West Berks: the canal at Hungerford [3368] (**OXF**) (last seen 1946) and Newbury [46] (**BM**), Abingdon (**BM**) [49], Moulsoford (**BM**) [58], a pool by the railway at South Hinksey [50] (**BM**) (last seen here (**OXF**) in 1975). Atlas 2000: [46], [50]

Potamogeton pusillus L. *Lesser Pondweed* hyd 6

Potamogeton trichoides auct., non Cham. & Schldl.
Potamogeton panormitanus Biv.
Potamogeton friesii auct., non Rupr.

The commonest pondweed in disused gravel pits, also found in rivers, ditches, ponds, where it is fond of slow-running or stagnant water. Uncommon but probably overlooked and likely to be mis-recorded for *P. berchtoldii* (see below). In *P. pusillus* the stipule is fused into a tube, not merely wrapped round the adjacent leaf base. Leaves abruptly mucronate, between 1.0mm and 1.8mm wide, not rigid. NVC: A 8,11

East Berks: Wargrave, Windsor, Bray, Haines Hill, Haws Hill. Woodley pit (**BM**), Twyford pit (**BM**), Cookham Moor, Thames at Cliveden (**BM**) in the 1960s. In the old gravel pits at Trilakes west of Sandhurst [829614] in 1975 (**OXF**). Colebrook Lake North [8062] in 1991. Still occasional in Heath Lake [829652] (but see *P. berchtoldii* below), Lower Lake at Sandhurst [8660] (but in the v.c.17 part), and in a backwater of the Thames at Hurley [824841] in 2002. 1 % (1km²). Atlas 2000: [86], [88]

West Berks: Stanford-in-the-vale pit [327940]. Wytham [40], Westfield [539925] (all **BM**). Recent records from Theale (**BM**) [67] Pingewood [66] gravel pits, and in Reading's Lake District [6870] and [6970] in 2002. Atlas 2000: [59], [50], [67]

Potamogeton obtusifolius Mert. & W.D.J. Koch *Blunt-leaved Pondweed* hyd 6 ↓

Lakes and gravel pits with acid water; locally frequent in east Berkshire. Broad, grass-like leaves forming fan-like sprays; stipules not fused into a tube around the stem. NVC: A 7,8,10,11,13,23,24

East Berks: Druce had trouble with the Bulmarsh site, writing: "I have not seen the plant, as the owner of the property refused me permission to go over his estate", rather common in some parts of Virginia Water. Bearwood (1962-73), Woodley pits (1962), Bulmarsh (1965), South Lake (**BM**) 1965-72, Wokingham (1966), Virginia Water (**BM** and **OXF**) 1893-1931. Stud Green [884776] in 1966, Titness Park [9568] in 1974, east of Yateley Bridge (**OXF**) [828613] in 1975, gravel pits at Sandhurst [828613] in 1975, Wellington College [8364] in 1986. Still occurs at low density in Heath Lake [829652] mixed with *Elodea nuttallii*. In Upper and Lower Lakes at Sandhurst (in both v.c.17 and v.c.22) [8660] in July 2002. Locally plentiful in one place on the west side of Colebrook South Lake [8062] in Moor Green Lakes nature reserve in 2002. 1 % (1km²). Atlas 2000: [76], [86], [87]

West Berks: Atlas 2000: [46]

Potamogeton trichoides Cham. & Schldl. *Hairlike Pondweed* hyd 6 ↓

A local speciality of still, shallow water over soft inorganic substrates. It grows alone, mixed with *P. pusillus*, or in dense vegetation like *Elodea nuttallii*. Stipules not fused into a tube, leaves less than 1mm wide, fruits warty near base. NVC: A 11

East Berks: not in Druce. Strand Ditch in 1938-40 [8985] (**BM**) and White Brook in 1939 [9083] (**BM**) at Cookham. Moor Green Lakes [807625] in 2001.

West Berks: gravel pit at Brimpton [567652] in 1986, and in Reading's Lake District [6970] in 2002.

Eleocharis acicularis (L.) Roem. & Schult. *Needle Spike-rush* hel 8 ↓
Scirpus acicularis L.

A local speciality of shallow eutrophic water (less than 50cm deep) in sheltered lakes and backwaters of rivers, streams or canals. Commonly found on summer-dry, seasonally inundated sites or on river-dredgings with *Juncus bufonius*, *Gnaphalium uliginosum*, etc. Told by its very narrow stems (less than 0.5mm wide) with 4 ridges, and tiny lowermost glumes (1.5-2.5mm).

NVC: A 8

Ascot: no records.

East Berks: Bulmarsh Heath, rare on banks of Thames, Virginia Water, in the lake at Sandhurst. Once locally abundant, now extinct at many of its former sites, but there are recent records from Cock Marsh and from the shores of gravel pits at Charvil [781752] and [782758] and Sandhurst [8660] from the v.c.22 part of Lower Lake in July 2002. Moor Green Lakes [8062] in 2002, locally frequent. <1% (1km²). Atlas 2000: [77], [86], [88]

West Berks: extinct at all 8 of its former sites. Once known from the Wiltshire and Berkshire canal at Shrivvenham [28], Eynsham [40], South Hinksey [50], the canal at Hamstead Marshall and Padworth [46] etc. Locally abundant on the gravelly margin of a pond near Goldfinch Bottom on Greenham Common [509641] on 21 August 2006, where it was found by Ron Porley growing with *E. palustris*. Atlas 2000: no records.

Bolboschoenus maritimus (L.) Palla *Sea Club-rush* hel 7 ↓
Scirpus maritimus L.
Schoenoplectus maritimus (L.) Lye

Saline ditches and ornamental lakes. Local and rare.

East Berks: reported by S. Rudge from Sonning in 1800 (**BM**), but Druce could not find it here. Ted Green knew the plant from [8380] where it grew with *Ranunculus lingua* in 1978.

West Berks: still plentiful in 1897 in a deep saline ditch which bordered the east side of the brackish meadow at Marcham [4595], growing with *Zannichellia palustris* and *Ranunculus trichophyllus*, with *Apium graveolens* on the banks of the ditch (Druce, last seen here by Bowen in 1964). Also in a pond at Snelsmore [4671] and in Englefield Park Lake [6271] in 1962 (**RNG**). In a small reservoir, built in 1974, at Frilford [434977] in 1978. Atlas 2000: [59], [57], [67]

Scirpus sylvaticus L. *Wood Club-rush* hel 6

Shady swamps on acid soils. Local and rare, but typically dominant where it occurs.
NVC: OV 30; W 5

Silwood Park: a Silwood speciality (**RNG** in 1970), locally dominant on flat muddy stretches of the Clear Brook (The Marsh (Plate 13), Guinness's Bridge), and occasional in the alder swamps around the Red Brook (Cascade Marsh and Great Mead). Also on the margins of The Lake at The Willows and Guinness's Thicket. It is home to several rare Heteroptera, most notably *Cymus obliquus* which is a southern and central European bug which was discovered by Dick Southwood in The Marsh at Silwood in 1956.

Ascot: very local. Johnson's Pond, Sunninghill Park, Windsor Great Park by Virginia Water.

East Berks: near Sonning, Windsor, near Wellington College, by the Loddon near Sindlesham Mill, rather plentiful on both sides of the Blackwater near Thatcher's Ford. Coleman's Moor, Wokingham, Sandhurst. Recently at Eversley Bridge [760629], Shepherd Meadow at Camberley, Moor Green Lakes nature reserve [8062]. 2% (1km²). Atlas 2000: [76], [77], [86], [96], [97]

West Berks: very local in the central Kennet valley with an outlying station at South Hinksey [50]; extinct elsewhere. Sandlesford [46], Boxford and Winterbourne [47], Thornford Bridge, Great Wood, Woolhampton and Thatcham Station [56]. Atlas 2000: [46], [56], [57], [50]

Cyperus fuscus L. *Brown Galingale*

th 7 ↓

A local speciality and *Red Data Book* species of seasonally flooded pond margins, on soils rich in organic matter at the junction of the Tertiary deposits and the chalk. A summer-germinating annual with a long-lived seed bank, flowering late in the summer (July to September). The ground is typically open and heavily poached by cattle hooves. Associated species include *Agrostis stolonifera*, *Bidens cernua*, *Gnaphalium uliginosum*, *Hottonia palustris*, *Juncus bufonius*, *Mentha aquatica*, *Myosotis laxa*, *Oenanthe fistulosa*, *O. aquatica*, *Persicaria hydropiper*, *P. minor*, *Ranunculus sceleratus*, *Rorippa palustris* and *Stellaria palustris*.

East Berks: known only from the 3 ponds at Cock Marsh [880867] (Plate 16). Numbers fluctuate dramatically from year to year with variation in weather conditions and the intensity of competition from taller vegetation. Threatened by willow scrub encroachment, but this is periodically cut back as part of site management. The cattle grazing on the marsh is sympathetically managed. Neither Druce nor Bowen knew of this site. <1% (1km²). Atlas 2000: [88]

West Berks: extinct. Formerly known from a damp copse between Pangbourne and Sulham [67] in 1911 (**OXF** and **RNG**). Atlas 2000: no records

Schoenus nigricans L. *Black Bog-rush*

hs 5 ↓

Fens, bogs and marshes; very local and rare. These Berkshire records are the most continental in England and Wales; in Britain, *Schoenus* typically grows within a few miles of the seaside (see Plate 3).
NVC: M 13,24

East Berks: Bagshot Heath, extinct (if indeed it ever grew here; the early record could have been from v.c.17 Surrey). The plant still grows in [96] across the border in Surrey just south of our area in Lightwater Bog and Great Bottom on Westend Common. Atlas 2000: no records.

West Berks: restricted to the Northern Loop, extinct in its former stations in the western Kennet Valley (Kintbury [36] and Greenham Common [46]). Peat Bottom Wood [3495] and Hatford Wood [3394], fens at Frilford golf course [4497], Cothill Fen [4699] (Plate 3), Barrow Farm [4697] and Wootton [4701] and in Dry Sandford Pit [469996]. Atlas 2000: [49], [40]

Rhynchospora alba (L.) Vahl *White Beak-sedge*
Schoenus albus L.

hel 7 ↓

Wet heaths and bogs. The species has suffered a massive decline in distribution and abundance. To Druce it was "local but rather common where it occurs", whereas Bowen considered it to be "very local and decreasing". It is now rare and confined to south-east Berkshire.
NVC: M 16,21

Ascot: first recorded by Sir Joseph Banks from Sunningwell Bog in 1773 (**BM**). Bog near Windsor Great Park, "on the peat bogs in Sunningwell in great plenty". Long extinct as a result of drainage of the bog. It still grows on Sunningdale golf course [960655] on Chobham Common in the Surrey part of Sunningdale (v.c.17).

East Berks: Bulmarsh Heath, Bagshot Heath, Wellington College, near Sandhurst, Easthampstead Plain, Broad Moor, Wild Moor Bottom, near Bracknell, Crowthorne [8463] in 1967. Extinct at most of its former stations, but still at Owlsmoor Bog [849630], Wellington College Bog and Broadmoor. Atlas 2000: [86]

West Berks: very local and rare. Snelsmore Common [4671] in 1984 and 1999. Formerly at Three Firs [66] in 1892 (**RNG**) and Greenham Common [46] in 1897. Atlas 2000: [47]

Cladium mariscus (L.) Pohl *Great Fen-sedge*
Schoenus mariscus L.

hel 7

Shaded fens, very local and rare.
NVC: M 13,22,24; S 4,25

East Berks: no records.

West Berks: about 50 plants in two separate patches in wet woodland at Peat Bottom Wood [335958] and [344954] in 1966 but not seen since. In cleared fen at Cothill [459996] in 1982 and 1988. Atlas 2000: [49]

Carex elongata L. *Elongated Sedge*

hs 5 ↓

A local speciality of lowland ponds and canal sides or wet alder woods and flooded meadows which dry out in summer. Rarely found as an epiphyte on fallen trunks in alder or willow carr. Utricles not winged, reddish purple to dark brown (not pale, as in *C. curta*).

East Berks: found in 1890 “on a marshy tract of ground, once Coleman’s Moor (**OXF** and **RNG**) in 1891, now almost entirely under cultivation. It occurs in hedges near Sandford Bridge and by a pond near Loddon Bridge” (Druce). Sparingly between Jouldern’s Ford and Thatcher’s Ford on the Blackwater (1898). Ditches along the Reading road past Hurst Grove. Sandford Mill [7873] in 1936 (**RNG**). By Bowen’s time, the plant was thought to be extinct in our area, largely as a result of drainage followed by urban expansion. Still at Wisley in Surrey [05]. Very rare in North Hampshire in very wet, acid willow-carr and alder-carr, beside very wet ditches; the site at Aldershot [85] was destroyed by road building in 1994 but plants were propagated and moved to an adjacent site in Surrey. Between Sandhurst and Blackwater (**OXF**) in 1898. Thought extinct by Bowen, but refound by R.C. Palmer in 1977. There were about 15 tussocks in a copse north of Blackwater Station on the Berkshire side of the river [851602] (**OXF**). <1% (1km²). Atlas 2000: [86]

West Berks: Padworth [66] in 1961 (**RNG**), but extinct by 1984. Atlas 2000: no record

Carex curta Gooden. *White Sedge*

hs 5

Carex canescens sensu Light. et auct., non L.

A local speciality of ferruginous swamps, alder carr, *Sphagnum* bogs, marshes, and wet places on heaths, often in shade; local and rare; confined to south-east Berkshire. Heavily grazed by deer in early spring, and this delays flowering. A pale-green sedge found growing near to, but in wetter places than, the grass-green *C. remota*. The pale-green utricles are unwinged in their upper half (not winged like *C. ovalis*). It is simple to tell *C. remota* from *C. curta* on leaf colour alone. In flower, the lowest bract of *C. remota* is leaf-like and much longer than the inflorescence, whereas *C. curta* has virtually no lower bract at all.

NVC: S 8

Silwood Park: one of our rarest native plants. Local and rare in Cascade Marsh, in bare, muddy runnels in alder woodland close to the edge of the lake, opposite the outflow sluice [942690]. Discovered during a survey of the alder carr in August 1982. In May 2000 there were 10 good tussocks around an open, black swamp about 10m inland from the lake-side alders, and before the terrestrial oak-birch woodland began; there were 12 in April 2002 and 22 in May 2003. The other black swamps nearby were dominated by *C. remota* with its glossy, grass-green leaves. The tussocks of *C. curta* are about the same size, but paler, duller green, and earlier into flower. The population may be increasing in numbers, but the plant is absent from all but one of the apparently suitable patches of black swamp, and may be dispersal-limited. A big tree fall during the winter of 2002-03 created a large light gap nearby, and it will be interesting to see if this has a negative impact on *C. curta*. Little change in distribution or abundance on 22 May 2007.

Ascot: plentiful in Sunningwell Bog in Druce’s time, but now much reduced through drainage. It is still locally frequent in standing ferruginous water beneath *Salix cinerea* in the north-west corner of Sunningwell Bog at [927683] growing with *Hydrocotyle vulgaris* and *Equisetum fluviatile*, beneath birches in South Ascot Bog [924677] with *Molinia caerulea* and *E. fluviatile*, by the lower of the two Sole’s Ponds east of Ascot Station, and near the stream in the north-east corner of South Ascot Bog [927676]. Still at Tower Hill, under alder and birch at the western edge of Englemere Pond, and at Virginia Water. Other recent records from South Ascot [9267], and at Rapley Lakes [8964]. There is a thriving population in Whitmoor Bog, on the northern shore of the pond that backs onto the northern embankment of the railway line, immediately opposite the Sewage Works [891683]; in full flower on 28 April in the early spring of 2002 (it typically reaches full flower during the second week in May).

East Berks: Virginia Water, still plentiful there at the western end in Berkshire. In great luxuriance at Spout Pond and by Heath Pool near Wellington College. Sandhurst Lake, Heath Pool, Long Moor, road between Wellington College and Wokingham. Long Moor, Finchampstead Ridges, Queens Mere, Wokingham Station (**RNG**), Sandhurst Academy. Recently in the water of the stream on the eastern side of the lake close to the entrance to California Country Park. Also at Wishmoor Cross and at the eastern end of Upper Lake at the Royal Military Academy Sandhurst. Much the best place to see this plant, however, is from the boardwalk through Longmoor Bog [784653], at the western end of California Country Park, where it grows luxuriantly in alder carr with abundant *Equisetum fluviatile*. 2% (1km²). Atlas 2000: [76], [86], [96], [97]

West Berks: Atlas 2000: no records.

Carex pulicaris L. *Flea Sedge*

hs 5 ↓

Bogs, marshy places, and wet heaths; local and decreasing in south Berkshire. The individual fruits are supposed to look like fleas, hence the name. Spike one, terminal. Stigmas 2, utricles 4-6mm, strongly reflexed, not ribbed.
NVC: M 13,24

Ascot: there are old records from Sunningwell Bog, below The Wells pub, but long extinct.

East Berks: Bulmarsh, Small Brook Marsh, Sandhurst, Broadmoor, Long Moor, Windsor Park, Easthampstead. Coleman's Moor [7570], Twyford [7575], Owlsmoor [8463]. Rare near the Thames in [7570] and on the acid bogs of the extreme south-east, but extinct at most of its former stations including the Virginia Water. Commonest at Broadmoor Bottom. 1% (1km²). Atlas 2000: [77], [86]

West Berks: very local in the Northern Loop and the heaths of the Kennet valley. Inkpen Common [383641], Hatford Wood [3394], Enborne [439652], Snelsmore Common [4671], Frilford Heath golf course [442986], Cothill fen [4690], Barrow Farm fen [4697], Wootton fen [4601], Radbrook Common [4505]. Atlas 2000: [37], [39], [46], [47], [49], [40], [56], [57]

Agrostis curtisii Kerguélen *Bristle Bent*

hs 6

Agrostis setacea Curtis, non Villars

A local speciality of heaths on the Bagshot Sands (see p. 18), especially in the drier parts where *Molinia* is less abundant. Very local, but common over limited areas. The pale-green, wiry-leaved tussocks make the plant look superficially more *Festuca*-like than *Agrostis*-like. Palea small, rhizomes usually present but stolons always absent. Inflorescence with erect branches.
NVC: H 2,3; M 16,21; U 20

Silwood Park: grown on North Gravel in experimental plots along with *Molinia* in 1979, but extinct following construction of Southwood Halls. Neither grass showed any recruitment from seed, and neither has been seen since.

Ascot: Sunninghill, Englemere, Swinley, Heatherwood Hospital. Still to be found on the broader heathy rides through the conifer plantations on the Crown Estates to the west of the Bagshot to Ascot railway, from Kingsride down to Earlywood [910670].

East Berks: confined entirely to heathland on the Surrey border in the extreme south-east. Bagshot Heath, Sandhurst (OXF) in 1892, Swinley Park, Easthampstead Plain (1897). Lower Star Post (OXF) in 1966 (still there in 2004), Deer Rock Hill (1983), Owlsmoor Bog [8462] (1986-2004). Recently at Edgebarrow, Read Research Lab, Caesar's Camp, Wishmoor Bottom, Wishmoor Cross, Devil's Highway, Upper Star Post, Mill Pond, Rapley Lakes. 2% (1km²). Atlas 2000: [86], [96]

West Berks: very local and rare: Snelsmore Common [4670], Downe House [57], Padworth Common [6164], Mortimer Common [66] (RDG). Very local and rare on Greenham Common; two widely-separated tussocks were found during the BSBI visit on 23 June 2007 in heather just north of the main runway to the south of the central car park [499645]. Atlas 2000: [47], [66]

Apera spica-venti (L.) P. Beauv. *Loose Silky-bent*

o th 6

Agrostis spica-venti L.

An elegant, tall, annual grass weed of dry, sandy arable land; one of our local specialities. Locally, a serious weed of wheat crops on light soils. Otherwise, a garden escape or casual, rarely established at any one site for more than a few years. Regarded as an alien by Easy (in Stewart, 1994) but considered native by both Druce and Bowen. Stace says "possibly native". Now classed as an archaeophyte (Preston, Pearman and Dines, 2002).

Silwood Park: one of our few nationally scarce plants. Silwood may be the site from which Druce knew the plant in the 19th century: he wrote "near Sunninghill just within the county". It is locally frequent in the south-eastern corner of the arable fallow at Ashurst Four Acre Field, which has been managed specifically for the conservation of this beautiful grass since 1985 using autumn-cultivation; particularly abundant, however, in July 2003 after spring cultivation, in places where the *Cirsium arvense* was less dense, but there were only 5 stems in July 2004 following autumn cultivation in 2003. The population recovered well and was strong on 25 June 2005 after a very dry spring, following

autumn cultivation in 2004. In 2007, the plants were very short-stemmed, only about half the height of neighbouring *Arrhenatherum elatius*. Also found in the October-cultivated plots (replicate 1, nearest the Met Tower) of the Pound Hill disturbance timing experiment on 4 July 1999, but much rarer at this site than at Ashurst. Locally frequent (more than 100 plants) in a roughly square area on the eastern side of Silwood Bottom (closer to the Hut than The Gate) on 26 July 2005 [94470 68889] following cultivation in October 2004. Locally abundant in July 2006 (its best year ever), on autumn-cultivated plots following a succession of two very dry winters, all down the southern edge of Ashurst Four Acre Field and in a clear-cut, circular patch of 12m diameter, in the centre of Silwood Bottom, just south-east of The Shed. In the same place in July 2007, but the plants were less numerous and much shorter-stemmed than in 2006.

East Berks: cornfields near Old Windsor, common in sandy fields among corn, Emmbrook Brickfields, abundant in a cornfield near Ambarrow, Finchampstead, Sandhurst. Hurst, Sonning, Reading tip, Wargrave, Twyford, Little Sandhurst, Easthampstead, Warren Row, Bracknell, Cookham, Sunninghill, Old Windsor. Scattered in the sandy parts of the region, with recent records from an old gravel pit at Queen's Eyot near Bray [9178], a commercial fruit growing enterprise at Grays Farm Wokingham [8267], wheatfields at Cookham Dean [8785] and arable land at Holm Grange [8367]. 1% (1km²). Atlas 2000: all except [78]

West Berks: local and rare. Cornfield at West Hagbourne Road near Didcot [5188] (**OXF**), in an old pit at Pingewood [690693]. Common inside recently-erected rabbit fences at Dry Sandford Pit [4699] in June 2002 and May 2004, suggesting that the plant may be under-recorded in heavily grazed communities. The commonest weed in a wheat field at Kingston Bagpuize [4098] in July 2003. Atlas 2000: [58], [59]

Apera interrupta (L.) P. Beauv. *Dense Silky-bent*
Agrostis interrupta L.

• th 6

A nationally scarce grass of arable land, rail verges and gravel pits, growing with *Arenaria serpyllifolia*, *Catapodium rigidum* and *Sagina procumbens*. It is a tiny plant when growing on unfertilized sandy soils, but can reach 50cm on fertilised arable land (in East Anglia it is sometimes regarded as a serious arable weed). G. Easy considered it to be a native plant of sheepwalks on the chalk and Stace says "possibly native". Now classed as an neophyte (Preston, Pearman and Dines, 2002).

East Berks: no records.

West Berks: restricted to the Northern Loop, where it was first recorded by Druce from a wall in Marcham [4596] in 1900, with an outlying station on Greenham Common in the south. Next found in arable land at Frilford (**OXF**, **LAN** and **RNG**) [442962] between 1923 and 1960. Discovered on Frilford Heath golf course [448986] in 1964. Found at the back of Cothill pit [467995] in 1981. Discovered in 1995 in a sandy field planted with *Vicia faba* at Marcham [446969] and a cereal field at Bessels Leigh [459019]. Found recently by Ron Porley on Greenham Common [521643] in 1998; the tiny plants were locally frequent on open sandy ground at the south-east corner of the former military airbase, discovered during work to clear away the old runways; still there in 2002. In set-aside at Black Horse Field [468979] and Frilford Heath [447981] in 2001. In a field north of the sandstone pit at Tubney [448008] in 2002. Susan Erskine found plants in June 2005 on the edge of a set-aside field at Folly Hill [295956], and on Frilford Heath Common [442976]. Atlas 2000: [49], [40], [56]

Alopecurus aequalis Sobol. *Orange Foxtail*
Alopecurus fulvus Smith

th 5 ↓ or †

A local speciality of mud at the margins of shallow ponds, gravel pits and reservoirs often growing with plants like *Agrostis stolonifera*, *Chenopodium rubrum* and *Juncus articulatus*. Fluctuating greatly in abundance from year to year. Told from *A. geniculatus* by its orange (not purple) anthers and lemmas un-awned or awns not exerted by more than 0.5mm. It prefers wetter places than *A. geniculatus*.
NVC: OV 35

East Berks: almost certainly extinct. "A conspicuous object from its bright orange-scarlet anthers and glaucous foliage" (Druce). Formerly very local and confined to a few localities on the London clay. Brickfield by Emmbrook Mill [7969] north of Wokingham (1871), still there sparingly in 1889 (Rev V.C. Crawley), but plentiful in 1892 when Druce ripped up considerable quantities of plants for the Botanical Exchange Club. In great abundance in two ponds opposite Shottesbrooke Church [838764] (**OXF**) (the ponds nearer Waltham, not the one closest to the church) on the road to Twyford (now the B3024) in 1894. Marshes near Twyford and Ruscombe (1897). It was still at Emmbrook Mill in 1930 (**RDG**), but not seen in Druce's other sites. Scandalously, the once-celebrated ponds at Shottesbrooke were destroyed for land-fill during the 1980s. Very scarce in both Surrey [95] and north-east Hampshire [75, 76]. Not in Wiltshire or in the adjacent parts of Oxfordshire. Well worth searching the wet ground around the massive M4/A329(M) interchange [7970]. Atlas 2000: no records.

West Berks: probably extinct. Padworth Common [66] in 1918, Grazeley Green (**BM**) [66] in 1935, a pond on Sulham hill top [67] in 1955, and old gravel pits at Pingewood [690693] in 1986. Atlas 2000: no records.

Hordeum secalinum Schreb. *Meadow Barley*
Hordeum nodosum auct., non L.
Critesion secalinum (Schreber) Á. Löve

hp 6

A local speciality and a distinctive feature of the Thames-side alluvial meadows, but absent from the chalk and south Berkshire. Frequent to locally co-dominant in *Holcus lanatus-Deschampsia cespitosa* grassland.
NVC: MG 9

Silwood Park: unintentionally introduced as a seed contaminant at Oak Mead, where it was very local on one of the Biodepth II plots on 8 July 2000. Growing with other meadow plants like *Phleum pratense* and *Trisetum flavescens* in what was supposed to be a monoculture of *Arrhenatherum elatius*. Not in any of the natural grasslands.

Ascot: appearing in the ancient grasslands as soon as one crosses onto the clay at the Polo Club, Cranbourne, Forest Lodge, Cumberland Lodge, Copper Horse, Spring Hill, Bear's Rails and Park Place.

East Berks: low lying meadows by the Thames all the way from Reading down to Old Windsor. One of the commonest grasses in the rich alluvial meadows and pastures of the northern parts of Windsor Great Park as in Stag Meadow, Review Ground and on the Cavalry Exercise Ground. Sonning, Bray, by the side of the Thames at Park Place, Charvil Meadows. In the wet meadow at Marsh Down, Shottesbrooke [8476] in 2003. 2% (1km²). Atlas 2000: all except [86], [96]

West Berks: frequent in the Thames Valley and the Northern Loop, but absent to the south of 85 except for a scattering of outliers as at Sandford [473654], by the side of the A4 near Midgham Park [562667] and near Aldermaston [6065]. Atlas 2000: all except [37], [47], [57]

Bromopsis benekenii (Lange) Holub *Lesser Hairy-brome*
Schedonorus benekenii Lange
Bromus benekenii (Lange) Trimen
Zerna benekenii (Lange) Lindman
Zerna ramosa (Hudson) Lindman subsp. benekenii (Lange) Tzvelev
Bromopsis ramosa (Hudson) Holub subsp. benekenii (Lange) Tzvelev

hp 7 ↓

A local rarity of beech woods on chalk. A scarce plant in Britain, confined to dry beech woods on shallow chalk, typically on steep valley sides. Hard to separate from *B. ramosa*: the lowest panicle node has > 2 branches (2 in *B. ramosa*) and the spikelet scale is glabrous (pubescent in *B. ramosa*), with the whole panicle swept to one side (pendent in *B. ramosa*). A useful field character is that the sheath is almost hairless below the ligule (long-hairy in *B. ramosa*).

East Berks: not seen by Druce. Very local and rare. Hurley (1966), and found by C.E. Hubbard in Quarry Wood (**K**) [8685] in 1971. Atlas 2000: no records.

West Berks: at Streatley [58] in 1883 (**OXF**) and Frilsham [57] in 1897. In a beech wood at Harley Hill Wood, Upper Basildon [595777] in 1964. Atlas 2000: [57]

Hordelymus europaeus (L.) Jess. ex Harz *Wood Barley*
Elymus europaeus L.
Hordeum sylvaticum Hudson, nom. illegit.

hs 6 ↓

A scarce grass in Britain that tends to occur in small, discrete colonies on banks in beech woods and in hedgerows on chalk, often as an indicator of a medieval woodland boundary. Found beneath Elder or Hazel where light penetrates from the woodland edge. Known from *Hordeum* by the glumes fused (not free) at the base. An attractive, short-lived species, seeding readily but producing few vegetative shoots and hence rarely lasting for more than 2 or 3 years in any spot.

East Berks: local and rare. In "woods between Maidenhead and Great Marlow, about Henley and Marlow, abundantly in Bisham Woods, Quarry Wood" in Druce's time. By Bowen's time it was "local and usually in small quantity". At the top of Sham Hill [7683] above Henley (1960), Quarry Wood (1957), Park Wood (1952) Bisham. Now rare on the chalk in the northern part of the Thames valley from Remenham to Bisham. <1% (1km²). Atlas 2000: [78], [88]

West Berks: rare and declining. Near Childs Court Farm [5775] in 1963 and Harley Hill Wood [5977] in 1964. Layfields Copse [5776] in 1971 (det. C.E. Hubbard). In Radley Large Wood [5200] in 1981. Extinct in [58] where it was formerly found in Unhill Wood and [67] where it used to grow at Sulham. The surviving records for [67] are from north of the R. Thames in v.c.23 Oxfordshire. Atlas 2000: [57], [67]

Polygonatum multiflorum (L.) All. *Solomon's-seal*
Convallaria multiflora L.

grh 5

A local speciality of Kennet valley oak and alder woods, where it is locally abundant as an ancient woodland indicator species. Also occasional as a garden escape, but most if not all of the garden escapes are *P. x hybridum* (see below).
NVC: W 8

Ascot: no records of the wild plant (but see *P. x hybridum* below).

East Berks: between Shinfield and Swallowfield, Finchampstead woods, Ashley Hill wood. Rare as a native plant in Maidenhead Thicket in 1969. In the valley bottom at Lindenhill Wood [812795] in 2001. In shade on the edge of the ditch between Cannon Bridge and The Priory [705641] below Beech Hill in May 2002. <1% (1km²). Atlas 2000: [76], [88]

West Berks: a real local speciality, occasional in ancient woodlands throughout the Kennet valley (south of 80), but rare or absent to the north of 80. In Oldlands Copse near West Woodhay [378629], Ashampstead Common [5875], Sutton Courtenay [59] and in many south-eastern Kennet woodlands including [4065], [4570], [4575], [5962], [5070], [5570], [6060]. Particularly good on east-facing banks in Padworth Gully [6165]. Uncommon in Moor Copse Nature Reserve [6374]. Atlas 2000: all except [28], [38], [48], [40], [59], [68], [69]

Ornithogalum pyrenaicum L. *Spiked Star-of-Bethlehem*
Loncomelos pyrenaicus (L.) Hrouda ex Holub

gb 6

A local speciality of calcareous oak woodlands and hedge-banks in south-west Berkshire. Very restricted in its distribution, but locally frequent. This is a scarce British plant of Oolitic Limestone, Lower Chalk and Greensand, growing up to 1m tall when it flowers in mid-June. In ash woodland it is often associated with *Allium ursinum* and in some old and ancient woodlands it can vie for dominance with *Hyacinthoides non-scripta*, but it often grows in hedge-banks, roadsides, old green lanes, unimproved pasture and river banks. Seedlings are produced *en masse* in early spring, but they take several years to grow to flowering size. The plant is easiest to count in early spring, because its narrow, blue-green leaves appear before those of the bluebell with which it often grows. Its English stronghold is around Bath, but it has declined since Dutch Elm Disease because of the rank growth of *Urtica dioica* that has followed the increase in light following the death of the canopy trees, and the pulse of nutrients that resulted from decomposition of the elm trunks. The unopened flower spikes were formerly collected and sold as *Bath Asparagus*; according to White (1912) they were "very little inferior to the cultivated esculent". Long after the bluebells have gone to seed, the slender leafless stalks rise 60cm above the dark green woodland carpet. The most usual associate is *Mercurialis perennis*, but occasional spikes are found among *Hedera helix*, *Melica uniflora*, *Glechoma hederacea*, *Stellaria holostea* or even *Pteridium aquilinum*. It is the same height as the *Poa trivialis* and, amazingly, in the speckled sunlight, they can be confused with one another.

East Berks: no records. The Ashridge Wood [8171] records are errors for the celebrated Ashridge Wood [4978] in West Berkshire (see below).

West Berks: there are 3 epicentres to the distribution: Hungerford [36], Beedon [57] and Greenham Common [56] (map on p. 13). The plant is found in hedges around Wansdyke and Prosperous [335645] and at East Court [318645], by the side of the A338 south of Standen Manor [329660] and on Inkpen Lower Green [3564], and in woods at Lower Poughley [346728] and Rivar Copse [3161]. To the east of Beedon the plant is common in Ashridge Wood [498783]. Your first sight of it is likely to be at the crossroads of the green lanes, growing amongst ivy under a big beech tree (Plate 16). In the wood itself, the plant is commonest in the eastern edge, close to the grassy clearing. Sadly, the wood is spoiled by dark plantations of *Thuja plicata*. Also found on the sides of green lanes nearby, at Cheseridge Wood [507783], on the woodland edge by the track facing across to Banterwick farm at [503776], and in a wood margin below Nutfield Down at [488793]. In a roadside hedge in Harts Hill Road, Bucklebury [534685] in 2004. At Greenham Common the plants are found mainly to the north of the boundary road on either side of the cattle grid [507648], and near The Round House [515651] and [520650]. There were 14 spikes in long grass in full sun on the northern verge of the boundary road of Greenham Common, just before the sharp bend [519650] on the descent to Thatcham on 24 June 2007 in exactly the same location as the plant were re-discovered by Bill Helyar in the early 1970s (Druce knew this site, although he put it in the Pang rather than Kennet District: "On the banks by the side of Greenham"). Atlas 2000: [36], [37], [47], [48], [56], [57]

Leucojum aestivum L. *Summer Snowflake*
Leucojum aestivum subsp. **aestivum**

gb 4 ↓

Perhaps the most special of our local specialities. Berkshire's official county plant. A *Red Data Book* species of shady riverbanks and osier-holts, known locally as *Loddon Lily* (Plate 6). Most populations occur in willow carr or alder woodland along muddy river banks and ditches or on islets in rivers. It grows on flat, silty parts of the river bank that are flooded in winter but dry in summer. It has upright, grass-green tussocks of leaves that are often stained dirty brown by the floodwaters. Generally associated with a small number of other spring flowering species like *Arum maculatum* and *Ranunculus ficaria* and often with a rank growth of nettles and cleavers in summer. The leaves appear above ground in February or March and flowering occurs between late March and mid April (flowering as early as 28 February in the early spring of 2002); the last of the flowers hang on until the middle of May. About 70% of the entire British population occurs in just 6 sites (in the Loddon near Twyford and the Thames between Reading and Bisham). The main threats are urban development, road and bridge-building, drainage and riverbank engineering.

East Berks: its stronghold is still in the Loddon and Thames valleys to the south-east and east of Reading in [76] and [77] centred on Dinton Pastures Country Park. In Druce's time it was "locally common on the islands and banks of the Thames near the efflux of the Loddon (1809), between the Mill and the Pound at Sonning, Windsor, Henley, the beautiful snowflake can be found in masses on several of the eyots here, and below the marsh and Hambleden Lock, as altar decorations in Wargrave Church, by the Loddon in great luxuriance and beauty". Winnersh, Sandford Mill, Whistley Farm. It is still present from Park Place down to Cookham, but less abundantly than in the Loddon. Recent records from the confluence of the R. Kennet and R. Thames in Reading [730739], the Loddon Meads at Sindlesham [757696], Winnersh [766710], Loddon Bridge [768716], Sandford Mill [779729], Whistley Mill [789749], Sonning [764768], Shiplake [766773], Wargrave [783785], Aston [785845], a backwater at Hemmerton [7880], Quarry Wood [861858], south of Cookham [9080] and Windsor Racecourse [947766]. There are some good surviving fragments in 2004 to the north of Dinton Pastures, between Whistley Mill and Twyford (see p. 171), and in the ash/willow wood at the northern tip of Wargrave Marsh [779809]. Probably the best, and certainly the most accessible, population is in the willow/alder swamp, just north of the Upper Thames Rowing Club between Henley and Remenham, where the woodland edge comes right up to the Thames Path [767837] (Plate 6). 1% (1km²). Atlas 2000: [76], [77], [78], [88], [97], [98]

West Berks: in Druce's time, pre-1900, the plant was found by the Thames from Oxford [50] all the way down to Reading [67]: from between Iffley and Sandford, around Shillingford, Marcham, Tubney, Wittenham, and by the Thames between Wallingford and Reading. He writes "It is to be hoped that this great adornment of our rivers will not be too recklessly gathered. Large quantities from Shillingford have been sold in the Oxford streets recently". By Bowen's time in the 1960s, it was known only from north of Streatley [58], an island near Moulsoford viaduct [58], Clifton Hampden Bridge [59], Shillingford Bridge [59], Basildon Grotto [67] and north of Wallingford [68]. Recent records from Buscot Wharf [236978], by the R. Kennet, west of Hungerford [330701], Lashford Lane [40], the wet part of the old garden on Jarn Mound [40], Lowerhill Farm wood [59], an island in the R. Thames at Nuneham Courtenay [5397], in the flood zone adjacent to the Thames at Sutton Courtenay Manor House [501943], west of Long Wittenham [5493], [5884], [5892], Clifton Hampden bridge [548954], north of Wallingford [614908]. Atlas 2000: [28], [29], [46], [58], [59], [67], [68], [69]

Cephalanthera damasonium (Mill.) Druce *White Helleborine*
Cephalanthera pallens Rich.
Serapias damasonium Miller

grh 5 ↓

Beech woodlands on calcareous substrates; rather frequent on chalk, but rare on the coralline oolite. Absent from acid substrates.

NVC: W 12

Ascot: no records.

East Berks: restricted entirely to the chalk by the Thames from Park Place to Bisham. Near Henley, Hall Pace (1804), between Henley and Marlow, in Bisham Wood abundantly, plentiful above Hurley and Bisham Abbey, Park Place coming up in the trodden woodland paths, Ashley Hill, Quarry Wood" (Druce). Now much reduced. Recently at Crazies Hill, Hurley chalk pit, Quarry Wood and Bisham Woods [8584]. <1% (1km²). Atlas 2000: [77], [78], [88]

West Berks: commonest in the chalk woods near the river in the Pang valley and in the interior around Kingston Lisle [38] and [48]. Lynch Wood [37], in a beech plantation at Crog Hill [323834], Sparsholt [3487], Pitchpole Wood [3784], Lockinge [4387], East Hendred [4588], Rowstock Hill and Grove Farm [4789], near Hanger 9 at AERE Harwell [4887], Wytham Wood [40], Hampstead Norreys [57], Ashampstead Common [5875], Aldworth [5579],

Streatley [58], Unhill Wood [58], Bradfield, Tilehurst, Basildon and Sulham [67]. Atlas 2000: [38], [48], [40], [57], [58], [67]

Epipactis palustris (L.) Crantz *Marsh Helleborine*
Serapias helleborine L. var. palustris L.

g 6 ↓

Marshes and bogs; very rare, and extinct in most of its former sites.
NVC: M 13,22,24; S 1

East Berks: extinct. "Peaty margins of the larger lake at Bulmarsh" (presumably South Lake [7570]). Druce was "somewhat curious that none of the peaty bogs in the south of the county should yield this plant". Not seen by Bowen. Atlas 2000: no records.

West Berks: all but confined to [49] in the Northern Loop, with an outlier at Lower Lake, Elstrees school near Woolhampton [581673]. In a fen near Hatford [39], Frilford Heath golf course [442986], Hitchcopse pit [4599], Barrowfarm fen [4697], Cothill fen [4699], Abingdon [49], Foxcombe Hill and on the south side of Wytham [40]. Still in Cothill fen, in the wetland at the bottom of Dry Sandford Pit at Cothill, and on Frilford Heath golf course nearby. Atlas 2000: [49]

Epipactis purpurata Sm. *Violet Helleborine*

g 8 ↓

Epipactis sessilifolia Peterm.

Epipactis violacea (Dur.-Duq.) Boreau

Epipactis helleborine (L.) Crantz *purpurata* (Smith) Sunderm., nom. inval. praesp.

Open woodlands of oak and beech, rare and locally extinct. Told by its greyish (not dark green) violet-tinged leaves, the lowest of which is much longer than wide. The labellum has two smoothly pleated, pinkish bosses (not rough brownish bosses) at its base.

East Berks: "There is an *Epipactis* growing in the Stokenchurch woods which is, in its young state, quite purple in both leaves and stem; it must, I suppose, be *E. purpurata*. I have seen it also in Bisham Wood" (Mill, 1843). Quarry Wood (1897). Bear Grove [806796] in 1966. Atlas 2000: no records.

West Berks: scattered throughout the Kennet valley, but absent to the north of 80 with an outlier in the Northern Loop at Marley Wood [4707]. Great Park Wood [346756], Pond Close Wood, Kintbury [3565], Eastbury [3575], Mapleash Wood [4671], Dunston Park Wood north of Thatcham [5209 6838 and 5215 6832], Foxhold Farm [516642], Heath End [581628], Baughurst [5862], Chapel Row [572690], Jennett's Hill Wood [582709], northern edge of Fifty Acre Piece [6365], Tadley Common and Brocas Wood Mortimer [6363], Tilehurst [6874]. Atlas 2000: [36], [37], [46], [40], [56], [57], [66]

Epipactis helleborine (L.) Crantz *Broad-leaved Helleborine*

g 7

Epipactis latifolia
Serapias helleborine L.

Woods and bushy places. It is possible that this orchid has bucked the trend and has actually increased in abundance. Druce had it as “local and not common”, but it is certainly better described these days as locally frequent, at least on the Bagshot sands. Several of the old field records of *E. phyllanthes* and *E. leptochila* are certainly this species. The axis of the inflorescence is hairy (cf. *E. phyllanthes*) and the upper leaves are obviously spiral in their arrangement, rather than two-ranked (cf. *E. leptochila*). Told from *E. purpurata* by the 2 rough brown (not smoothly pleated pink) bosses at the base of the labellum.

NVC: W 14

Silwood Park: in woods at the edge of Rush Meadow, in naturally regenerated (post-myxomatosis) oak woodland below the Playing Field at Cheapside, Nash’s Copse, under beech by Drive Lawns, under birch on Reactor Bank. In shrub beds on the Science Park; the first by TTC, perhaps introduced in the rootball of *Quercus trojana* from 1992-2000, the second in the narrow strip of birch trees in the centre of the main car park first seen in June 2000. It has self-sown into the gravel strip that edges the road between Technology Transfer and Unit F; there were 3 flowering plants here on 26 June 2001. By July 2004 it was locally frequent around *Quercus aliena* beyond the Transformer at the end of TTC. Three patches, each with 6 good spikes, growing with *Ajuga reptans* in the damp shade of Water Meadow Woods on 28 July 1999.

Ascot: very common on shaded, sandy banks and waysides about Ascot. Rare on ruins during construction of the new grandstand at Ascot Racecourse [92034 68865] in August 2005.

East Berks: Bisham Wood, especially the continuation of it on the right of the Maidenhead Road, Park Place, railway embankment at Wellington College, Woodley, Bulmarsh Park (the type specimen), Windsor Forest. Woods, plantations and acid banks. Local and in small quantity. Wellington College, Queens Mere, Binfield, Ashley Hill, Sandhurst, Bracknell, Winkfield, Bisham Wood, Beenham Heath. Widespread, but least common in the west [76] and [77]. 7% (1km²). Atlas 2000: all except [78]

West Berks: occasional in the Kennet valley and the Northern Loop but rare to the north of 85. Atlas 2000: all except [29], [39], [48], [59], [68], [69]

Epipactis leptochila (Godfery) Godfery

g 6 ↓

Epipactis viridiflora (Hoffm.) Reichb. var. *leptochila* Godfery
Epipactis dunensis (Stephenson and T.A. Stephenson) Godfery
Epipactis cleistogama C. Thomas
Epipactis helleborine (L.) Crantz *leptochila* (Godfery) Sunderm., nom. inval. praesp.

A scarce plant in Britain, found on decomposed leaf litter in deep shade under beech woods on the chalk, where there is little or no ground cover. A long-lived perennial appearing above ground irregularly, but sometimes in great abundance (e.g. following scrub clearance). The upper leaves are obviously 2-ranked (not spirally arranged) and the pollinia crumble rather than become detached as entire units. Over-recorded for *E. helleborine*. These records are all det. D.P. Young.

East Berks: not separated by Druce. Rare in beech woods at Ashley Hill [8281] in 1966. There is a record from Bisham [8285] in 1925 (presumably Quarry Wood). Atlas 2000: no records.

West Berks: in beech woodland at Grims Ditch at Streatley [5959] (RDG), beech wood at Upper Basildon [5976] (RNG), Ridge House Drive in Upper Basildon [6078] (RDG and LAN), Westfield [6078]. Atlas 2000: [56], [57], [67]

Epipactis phyllanthes G.E. Sm. *Green-flowered Helleborine*

g 7 ↓

Epipactis vectensis (Stephenson and T.A. Stephenson) Brooke and F. Rose
Epipactis pendula C. Thomas, non A.A. Eaton
Epipactis cambrensis C. Thomas
Epipactis confusa D.P. Young
Epipactis helleborine (L.) Crantz *phyllanthes* (G.E. Smith) Sunderm., nom. inval. praesp.
Epipactis helleborine (L.) Crantz subsp. *phyllanthes* (G.E. Smith) Sunderm., nom. inval.

A scarce plant in Britain, found in shade on rather more acid soils than *E. leptochila*, often associated with *Pyrola minor* in beechwoods on flint capping, and with pine/birch on the Bagshot sands. The plant is completely autogamous with partially (var. *vectensis*) or completely (var. *degenera*, var. *phyllanthes*) cleistogamous flowers. This high level of

self pollination means that individuals within populations tend to be very similar, but there are marked differences from one population to another. Separated from *E. leptochila* by its less hairy flower stem and flowers that are pendulous as soon as they open. The leaves are often shorter than the internodes, but the East Berkshire plants have leaves longer than the internodes, which can make them hard to distinguish from *E. helleborine* (but the stigmas of *E. phyllanthes* have already been self-pollinated by the time the flowers have opened).

Silwood Park: locally frequent on compacted bare ground beneath *Quercus cerris* at the north-east corner of TTC; first seen in 1990, with about 100 spikes by July 2004.

East Berks: not separated by Druce. Rare in damp oak or alder woods at Maidenhead, Quarry Wood, Cookham Dean Common (all 1962). var. *vectensis* at Tower Hill [9066] (1966-2004), roadsides at Martins Heron, Bracknell [894695], Englemere [900685] and Kings Ride [909685] (19 and 26 plants respectively in 1986). Scattered in both verges of Longhill Road, just south of Longhill Road Roundabout [895695] in July 2004, found by John Ward-Smith. Atlas 2000: [86]

West Berks: near Ginge Brook [4487], in an alder wood at Cothill [4699], Wasing [5763], under beech at Heath End [582677] and [583629], var. *vectensis* at Brimpton [5796727], by the side of Welshman's Road near Benyon's Inclosure 30 plants of var. *pendula* [6164 and [6264] in 1980 (det. Francis Rose), at Mortimer [6263], Five Oaken [6465]. Recently from west of The Ark near Wantage [391871] in 1999, and still locally frequent in a beech wood at Tadley Common and on roadsides to the south of Wasing Wood from [580627] to [585630] where it grows with *E. purpurata*. There were c. 100 plants, extending over 400m close to the B3051 at the Heath End site [5820 6274] in July 2003. Atlas 2000: [46], [56], [66]

[*Epipogium aphyllum* Sw. *Ghost Orchid*]

One of Britain's rarest and most elusive species. A *Red Data Book* species, never recorded from Berkshire, but you can see the Buckinghamshire woods where it survives today from the top of Quarry Woods. An excellent candidate for introduction at Bisham Woods (along with Military and Monkey orchids and the rarer Helleborines) now that the land is secure in the possession of the Woodland Trust.

Neottia nidus-avis* (L.) Rich. *Bird's-nest Orchid
Ophrys nidus-avis L.

g 6

Shady woods on chalk, chiefly of beech or hazel, among the decaying leaves. Local and rare.
NVC: W 12

East Berks: Druce regarded the plant as "abundant in Bisham Wood, between Henley and Marlow, and abundant in Park Place". I suspect he was getting somewhat carried away, and what he actually meant was "locally frequent". In any case, the plant is now rare in Bisham [865856], but still relatively frequent at Park Place [775818], in the steep woods above the Wargrave to Henley road. Also in Ashley Wood, Bowsey Wood, Woodley, and Hurley. Recently, the plant has been superb in Park Place woods forming majestic, cinnamon-coloured tussocks of stems in dense shade beneath beech trees on a west facing slope (1980-2004). <1% (1km²). Atlas 2000: [77], [78], [88]

West Berks: Fernham [2991], Middle Brake Wood [3298], Kintbury [3866], under hazel at Cothill fen [4699], Wytham [4708], Furze Hill [5174], Yattendon [5474], Ashampstead Common [5875], Burnett's Copse [5677], Quicks Green [5876], Radley Large Wood [5398], Sulham Woods [6474], Flobrigham's Copse [624737]. Atlas 2000: [29], [36], [39], [46], [49], [40], [57], [50], [67]

Spiranthes spiralis* (L.) Chevall. *Autumn Lady's-tresses
Ophrys spiralis L.
Gyrostachis autumnalis Dumort

grt 8 ↓

Pastures, lawns and downs on acid or calcareous soils; local and rare.
NVC: CG 2

East Berks: near Remenham (1888). Sporadic and decreasing at Leighton Park (1941-55), Three Mile Cross (1918), Ashley Hill (1970). Crazies Hill. There is a carefully protected site on heathy ground in the centre of the Transport Research Laboratory [850655] at Crowthorne (1983-2004). <1% (1km²). Atlas 2000: [86]

West Berks: mostly in the Kennet valley to the south of 75, with an outlying station at East Garston [363768]. Irish Hill and Hamstead Marshall [46], Cold Ash [56], in several lawns near Aldermaston [5964], Hawkridge House [57],

Upton [58], Burghfield [66], Tilehurst [67]. Locally abundant on the ground that was the western end of the runway of Greenham Common airbase [495647], with several thousand spikes in late August 2001. Atlas 2000: [37], [38], [46], [56], [57],

Herminium monorchis (L.) R. Br. *Musk Orchid*
Ophrys monorchis L.

g 6 ↓

Chalk downs, very local and rare in west Berkshire.
NVC: CG 2

East Berks: never recorded from the Thames Valley chalk

West Berks: only on West Woodhay Downs [387618] on the chalk south of Inkpen (see Plate 9), and on Dragons Hill to the west of the crossroads below Whitehorse Hill [300870]. The Atlas record from [28] may be an error for the Dragons Hill site, but it is possible that the plant grows on the part of Whitehorse Hill that lies in [28]; a thorough search of the hill in early July might be fruitful. There is a record from “below Rivar Copse” [3562] in 1918, and it is possible that the chalk downs on the Hampshire border directly to the south of Inkpen might repay more detailed attention. The closest Hampshire records are [3256] and [3456] near Vernham Dean, but the best nearby place to guarantee seeing Musk Orchid is at Gilbert White’s celebrated site at Noar Hill [7431] near Selbourne in north-east Hampshire. Atlas 2000: [28], [36], [38]

Platanthera chlorantha (Custer) Rchb. *Greater Butterfly-orchid*
Habenaria chloroleuca Ridley
Orchis chlorantha Custer
X *Pseudanthera breadalbanensis* McKean

g 5 ↓

Oak and beech woods on nutrient-rich soils. Local, chiefly in the Thames valley, in small quantity and decreasing. The big pollinia (3-4mm) are converging towards their tips (2mm and parallel in *P. bifolia*).
NVC: MG 5; W 8

East Berks: Hall Place, in beech woods above Hurley and Bisham Abbey, Bisham Wood, Park Place, Windsor Forest, Binfield, Ashley Hill, Bowsey Hill. Not seen by Bowen and probably extinct. A strong candidate for reintroduction at Bisham now that the woods are owned by the Woodland Trust. Atlas 2000: no records.

West Berks: Carswell, Appleton, Wytham, Idstone Wood, Buscot, Marcham, Bagley Wood, Cothill, Radley, Tubney, Wittenham, Steventon, Norcott, Ashridge Wood, Unhill, Wolvers, Sulham, Hewins Wood, Streatley, Basildon, Compton, Fence Wood, Ashampstead, Woodhay, Weston, Riever Wood, Enborne, Lambourn Woodlands, Tilcombe, Templeton; extinct at more than half of its former sites. Now rare in the Thames and Kennet valleys, and all but absent from the interior. Recently from Coleshill [233939] and [248971], Royal Military Academy at Shrivenham [28], Eaton Wood [2696], Inkpen [36], on north-facing chalk at Cleeve Hill [333764], Middle Brake Wood [3298], Tubney Wood [4400], Stroud Copse [4407], Bushy Leaze Copse [4405], Wytham [4708], Unhill Wood [5682], Hampstead Norreys [5276], Ashampstead [5676], Little Wittenham Wood [5493], Radley Large Wood [5200], Sulham [6474], Tilehurst [6874]. Atlas 2000: [29], [36], [37], [39], [40], [57], [58], [59], [50], [67]

Platanthera bifolia (L.) Rich. *Lesser Butterfly-orchid*
Habenaria bifolia
Orchis bifolia L.

g 5 †

Oak woods, limestone grassland or acid grassland. Never more than very local and rare; now extinct.
NVC: MG 5

East Berks: near Wellington College (**OXF**) in 1897. Extinct.

West Berks: a single plant on Wytham Hill [40] in 1958, in Bagley Wood and Radley Large Wood [50] in 1949 and the last Berkshire record was from here in 1981. Recorded from the Military College at Shrivenham [28] in 1952. There are nineteenth century records from Sunningwell [50] (**OXF**) and Sulham [67]. Unhill Wood [58], last seen in 1978. Atlas 2000: no records.

X *Dactyloдения st-quintinii* (Godfery) J.Duvign = ***Gymnadenia conopsea* x *Dactylorhiza fuchsii***
X *Orchigymnadenia st-quintinii* Godfery

Not uncommon where the parents grow together.

West Berks: Cothill fen [49] in 1933 and West Woodhay Down [36] in 1984. Frequent in the grassland above the chalk pit at West Woodhay Down [388618] on 12 June 2004 with both parents and *Ophrys apifera*.

Coeloglossum viride (L.) Hartm. *Frog Orchid*
Satyrium viride L.
Habernaria viridis R. Br.

g 6 ↓

Chalk downs, pastures, heaths; occasional and declining, restricted to west Berkshire. Very intolerant of grassland fertilisation, and soon overrun by perennial grasses under high intensity management. Modern molecular evidence suggests that this species should be placed in the genus *Dactylorhiza* (Bateman *et al.*, 1997).
NVC: CG 2,3; MG 5

East Berks: never recorded from the east Berkshire chalk, nor from the adjacent chalk in Oxfordshire.

West Berks: Ashbury, Idstone, Whitehorse Hill, on the northern slope of Dragons Hill, Cumnor, Sandford lock, Sparsholt, Wantage, Bagley Wood, in various places along Ridgeway, Radley, Blewburton, Chilton, Lowbury, Lockinge Downs, Letcombe Castle, Uffington, Ilsley Downs, Unwell Downs, Moulsoford Downs, King Standing Hill, Sreatley, Shaw, Letcombe, Lambourn Downs, Gibbet Hill. Now greatly reduced in both distribution and abundance. Still found on the chalk between Ashbury [28] and Sreatley [58], and on the Hampshire border to the south of Inkpen, but probably extinct in the Northern Loop. The most recent records are from Hackpen Hill, Crowhole Bottom [356847], West Woodhay Down [388618], Dragons Hill [300870], Churn [5284], Aston Upthorpe Downs [5483] and Lower Chance Farm on the Ridgeway [58] in 2002. Five flowering stems on the species-rich ditch bank amongst abundant common spotted orchids by the path from the disabled car park to the top of the White Horse on Whitehorse Hill [300865] on the occasion of the BSBI visit on 24 June 2007. Atlas 2000: [36], [37], [38], [58]

X Dactyloglossum mixtum (Asch. & Graebn.) Rauschert
= **Coeloglossum viride x Dactylorhiza fuchsii**
X Orchicoeloglossum mixtum Asch. & Graebner

Has the colour of the *Dactylorhiza* parent variously tinged and overlaid by green. The habit, leaves and perianth are all variously intermediate.

West Berks: Whitehorse Hill [3086] (det. V.S. Summerhayes) and still there in 2004, Devil's Punchbowl [355850], Moulsoford Down [5782].

X Dactyloglossum conigerum (Norman) Rauschert
= **Coeloglossum viride x Dactylorhiza maculata**
Coeloglossum x conigerum J. Norman
Orchis x mixta Domin, non Retz.
Orchis x dominiana Camus, Bergon and A. Camus
X Dactyloglossum dominianum (Camus, Bergon and A. Camus) Soó

West Berks: Lambourn [3280] in 1937 (**RDG**) (det. P.F. Hunt).

Dactylorhiza x kernerorum (Soó) Soó = **D. fuchsii x D. incarnata**
Orchis x kernerorum Soó
Orchis x engadinensis Cif. & Giacom., nom. nud.
Dactylorhiza x engadinensis (Cif. & Giacom.) Soó, nom. inval.
Dactylorhiza x variabilis (J. Heslop-Harrison) Soó

West Berks: Midgham [56] in 1892 (**BM**) and Cumnor [40] in 1938 (**BM**) (both det. P.F. Hunt).

Dactylorhiza x grandis (Druce) P.F. Hunt = **D. fuchsii x D. praetermissa**
Orchis x grandis Druce
Dactylorhiza x mortonii (Druce) Soó

According to Stace (1997) this is the commonest hybrid orchid in southern England.

Silwood Park: massive plants in Heronsbrook Meadow in tall damp grass adjacent to the track from Pond Field to Virginia Water Lodge (Plate 16); 7 big spikes with narrow spotted leaves on 26 June 2000. In the peak year of 2002, there were 38 big plants with spotted leaves, including 13 along the fence of the track to Virginia Water Lodge and 20

in the big central patch of orchids on 18 June. On 10 June 2004, there was total of 39 plants in Heronsbrook Meadow, most of them along the Virginia Water Lodge track edge.

Ascot: locally abundant in wet grass at the northern triangle of Ascot Racecourse (1980-2004); much bigger than either parent.

West Berks: Freeman's Marsh at Hungerford [3369], Buckland Park and Pusey marsh [39], Snelsmore Common [47], Frilford, Cothill fen, Dry Sandford Pit and Abingdon [49], Wytham meads [40], AWRE Aldermaston and Midgham Park [56], Didcot [58], by the Ridgeway [5282], Barrow Hills fen [5198], Radley gravel pits [5297].

Dactylorhiza maculata (L.) Soó *Heath Spotted-orchid* grt 6

Orchis maculata L.

Dactylorhiza maculata (L.) Vermeulen

Dactylorhiza maculata subsp. **ericetorum** (E.F. Linton) P.F. Hunt and Summerh.

Orchis maculata L. subsp. *ericetorum* E.F. Linton

Acid bogs, heaths and damp, acid grassland; local in south Berkshire and absent from calcareous soils.

NVC: M 15,16,24

Ascot: very rare at Tower Hill. I have never seen it there.

East Berks: Long Moor. Heath Pool, Wellington College, Surrells Wood, Broadmoor, Easthampstead. Superb in the bog below Broadmoor Hospital for the Criminally Insane in 1999. <1% (1km²). Atlas 2000: [76], [77], [86]

West Berks: in two centres, on the Northern Loop, and in the heaths of the south Kennet. Inkpen Common [3864], Southmoor [398977], Enborne [4365], Greenham Common [46], Snelsmore Common [47], Tubney Wood [4400], Hurst Hill [4704], Hermitage [5173], Baughurst [5862], Bucklebury Common [5669], AWRE Aldermaston [593627], Silchester Common [6162]. Atlas 2000: [36], [39], [46], [47], [49], [56], [57], [66]

Dactylorhiza x carnea (E.G. Camus) Soó = **D. maculata x D. incarnata**

Orchis x carnea Camus

Dactylorhiza x maculatifomis (Rouy) Borsos and Soó

Dactylorhiza x claudiopolitana (Simonkai) Borsos and Soó

Dactylorhiza x ampolai Hautzinger

East Berks: Sandhurst [8065] in 1896 (**OXF**) (det. P.F. Hunt).

West Berks: Frilford [4497] in 1915 (**OXF**) (det. P.F. Hunt).

Dactylorhiza incarnata (L.) Soó *Early Marsh-orchid* grt 5 ↓

Orchis incarnata L.

Dactylorhiza incarnata (L.) Vermeulen

Dactylorhiza incarnata subsp. **incarnata**

Orchis strictifolia Opiz

Marshes, fens and wet meadows on nutrient-rich soils; very local but plentiful where it occurs.

NVC: M 9,13,22,24

East Berks: near Earley by the railway, on Coleman's Moor. Thought to be extinct by Bowen, but refound (and det.) by C.J. Hora in 1989 in marshy ground south of Folly Court, Wokingham [794674-5]. One large spike (35cm tall) in the eastern arm of the sunken centre of the Running Horse Roundabout [883690] in Bracknell on 2 June 2003 and 24 May 2004 (det. R. Bateman), origin unknown but possibly sown as part of a wildflower mix during the original landscaping of the roundabout in 1996. John Ward-Smith found 3 plants in the meadow at Lily Hill Park [885694] amongst c.100 *D. fuchsii* on 9 June 2004. In May 2007, John Ward-Smith wrote "The majestic plant that flowered at the Running Horse Roundabout in 2003 and 2004, was again doing well in 2005. However, when I visited the site on 2 June 2005, some idiot had recently dug the plant up. I looked out for daughter plants in 2006 and found none, and a visit on 24 April 2007 yielded the same result. I will continue to monitor the site. Some compensation is the fact that the numbers at Lily Hill Park have increased in recent years. There were 7 spikes of *D. incarnata* in the grass south of Lily Hill House in 2006, though the specimens were nowhere near as imposing as the Roundabout specimen". <1% (1km²). Atlas 2000: [76]

West Berks: confined to the Northern Loop, the R. Cole and the Kennet valley (where it is least rare in the western reaches). Tuckmill Meadow and Royal Military College of Science at Shrivenham [28], Watchfield [2490], Pennyhooks Farm [2390], Hungerford Meads [3368], Kintbury [3866], Pusey [3596], in a rough field by the canal east of Marsh Benham [4267], Boxford Church [4271], Frilford [4497], Cothill Fen and Dry Sandford Pit [4699], Bessels Leigh [4501], Farmoor [4406], Cumnor [4604], Wytham Meads [4709], Goldfinch Bottom [5064], water meadows at Brimpton [5663], Hermitage [5173], Little Wittenham reserve meadow, Radley gravel pits [5297], Radley Meads [5398], Kennington [5202], Nunhide Lane [6472]. Atlas 2000: [28], [29], [36], [37], [39], [46], [47], [49], [40], [56], [57], [50], [67]

Dactylorhiza traunsteineri (Saut. ex Rchb.) Soó *Narrow-leaved Marsh-orchid* grt 5 ↓
Orchis traunsteineri Sauter ex Reichb.
Dactylorchis traunsteinerioides (Pugsley) Vermeulen
Dactylorchis traunsteineri (Sauter ex Reichb.) Vermeulen

Fens in north-west Berkshire, very local and rare.
NVC: M 13

West Berks: Tubney [4398] in 1882 (**BM**) (det P.F. Hunt). Cothill fen [460997] where it has been collected repeatedly (and quite unnecessarily) since 1954 (**BM, OXF, LAN**, plus 4 in **RNG**), Dry Sandford Pit (6 plants in 1960) (**RNG**), Frilford Heath golf course [442984] (since 1961, with 50 plants in 1979), Barrow Hills fen [516983] (20 plants in 1979). Also recorded from Abbey Fishponds [59] in 1985 without a specimen.

Orchis mascula (L.) L. *Early-purple Orchid* grt 4 ↓
Orchis morio L. var. mascula L.

Open oak woods, bushy places, meadows, heaths and chalk downs. "Rather common and widely distributed in every parish where there is woodland. Begins to flower a fortnight before *O. morio*" (Druce). By Bowen's time it was "local but widespread; mainly in small quantity". Its presence distinguishes all of the better surviving fragments of ancient woodland. Sadly uncommon, and now much reduced from its former abundance by such unsympathetic woodland management practices as pheasant rearing.
NVC: W 8

Ascot: no records. It is odd that the ancient woodlands in Windsor Great Park do not support this species.

East Berks: absent from large areas, and persisting in only a few undisturbed ancient woodlands as at New England Wood [855751], Ockwells Manor Wood [874785], Bisham Wood [8585] and Wykery Copse on the western edge of industrial Bracknell [8568]. 1% (1km²). Atlas 2000: all except [96], [97]

West Berks: occasional in the Thames and Kennet valleys but rare in the interior (north of 80 and south of 95). Stainswick Farm [28], Coleshill, Buscot House, Longcot, Little Coxwell, Camden Farm and Faringdon [29], Irish Hill [36], Britchcombe Farm and at [329895], Littleworth and Barcote manor [39]. Locally frequent in Moor Copse Nature Reserve [6374]. Discovered in Kintbury cemetery [36] in 2001. Atlas 2000: all except [58], [68], [69]

Orchis morio L. *Green-winged Orchid* grt 5 ↓

Meadows, pastures, chalk downs, heaths and bogs. Locally abundant in Druce's time but "uncommon and decreasing owing to ploughing and early grazing" by Bowen's time. Now local and rare. Molecular studies indicate that it may be more appropriately placed in the genus *Anacamptis* (Bateman *et al.*, 1997).
NVC: MG 5

Silwood Park: Cemetery Field, in rabbit-grazed turf. A single spike in full flower on 13 May 1991. Found by Chris Thomas during the first season of a ragwort experiment in the area between the bottom of the graveyard and the edge of Rookery Copse. Not seen since. The grass is much longer now, since the erection of a fence in 1991 excluded the grazing horses; the orchid has not been seen again. The fence was removed in 2003, but by then the site had become densely overgrown by a bramble thicket.

Ascot: no other records.

East Berks: Meadows near Wellington College, Park Place, Culham Court, Cranbourne Chase, Bulmarsh, Bracknell, Long Moor, Farley Hill, Stubbing's Heath, Hurley, Temple golf course, Cookham, Shinfield Grange, Arborfield, Wellington College, Wokingham, Hurley golf course, St Leonard's. Woodley (1919) (**RDG**). Scattered throughout, but extinct at several of its former sites. 1% (1km²). Atlas 2000: all except [78], [87]

West Berks: scattered throughout but extinct at most of its former sites on the chalk, with few modern records north of 75 or south of 90. Above Compton Beauchamp [2887], Inkpen [3562], Wickham [3971], Croker's Hole [322820], Pucketty Farm [3198], Charney Bassett [3794], Wash Common [4564], Newbury [4766], Frilford [4497], Farmoor [4406], Bessels Leigh [4501], Hill End Camp at Wytham [4505], Beenham House [5868], Aldermaston [5965], Frilsham [5373], Furze Hill [5174], Yattendon [5474], Cholsey [5886], Didcot [5190], Radley [5398], AWRE Aldermaston [6063], Burghfield Common [6566], Sulham [6474]. Atlas 2000: all except [29], [47], [48], [50], [67], [68], [69]

Orchis ustulata L. *Burnt Orchid*

grt 5 ↓

A truly charismatic orchid, symbol of all that is best about unspoilt chalk grassland. Rare and sporadic, flowering unpredictably. This is a scarce plant in Britain that grows in short, well grazed chalk downland with plants like *Anthyllis vulneraria*, *Gentianella amarella*, *Polygala calcarea*, *Sanguisorba minor*, *Primula veris* and *Rhinanthus minor*. It takes 10 years or so from germination to first flowering. Declined through ploughing, herbicide and fertilizer application, and cessation of grazing. It occurs in North Hampshire in [45] and [55], in Oxfordshire [41], just over the Wiltshire border south of Hungerford [36] and east of Swindon [27], but its Wiltshire headquarters are some distance away, to the north-west of Salisbury. Recent molecular studies indicate that it may be more appropriately treated in the genus *Neotinea* (Bateman *et al.*, 1997).

NVC: CG 2

East Berks: no records.

West Berks: rare on the chalk, but extinct on limestone in the Northern Loop. Last seen at Aston Upthorpe Down [544843] in 1988 and 1992, and before that at Kingstone Down above Ashdown House [2882] and at Blewburton Camp [5486] in 1964. There were several sightings in the 1950s at Gore Hill to the south of Chilton [4883], but the site was ploughed up, East Hendred downs [4685] and Streatley [5881], but most of the records were pre-1900: Whitehorse Hill [28], Lambourn Downs and Wantage [38], Cherbury Camp [39], Chilswell Hills [40], Ilsley Downs, Churn, Unhill and Moulsoford Downs [58]. Extremely sporadic in its flowering and hence always worth looking for at its former sites. Atlas 2000: [28], [38], [48], [58]

Orchis purpurea Huds. *Lady Orchid*

grt 5

Typically a plant of open beech woodland on chalk, disappearing if the wood becomes too dense or dark, and a candidate for introduction in Bisham Woods. There are recent records from [67] but these are from the Oxfordshire side of the Thames near Goring (one in, and the other close to, the Hartslock reserve; see *O. simia*, below). The top of each flower is dark purple, the bottom lighter (in *O. militaris*, the top is light and the bottom darker). The most recent addition to the Berkshire list.

West Berks: first county record in May 2005 from a chalky bank above the track leading up to The Ridgeway. A single flower stalk. The rumour in 2007 was that the plant was dug up towards the end of 2005 and was not seen in 2006 or subsequently.

Orchis militaris L. *Military Orchid*

grt 5 †

Woods and borders of woods on the chalk; formerly local and rare, now extinct. Survives close by on the Buckinghamshire side of the Thames at Marlow [88], in a grassy roadside bank on the forest edge.

East Berks: extinct. "About Henley, on the precipitous bank of Bisham Wood, near the Quarry, both below and above the path, but sparingly" (1843). In his *Flora of Buckinghamshire*, Druce writes "It is not easy to account for its disappearance. Willful depredations have been made by some botanists, not only by botanical students who should know better, but by Boswell Syme, the eminent author of *English Botany*, who collected rapaciously. Rabbits, I think, must have been an active agent". In the *Flora of Berkshire* he writes "The reckless manner in which Dr. Boswell Syme collected the rare Thames orchids was exceedingly reprehensible". Extinct in Berkshire according to Bowen. There is a 1987 record from Quarry Wood [858854], but Bowen did not find it in 1988, and I have not seen it subsequently. A candidate for reintroduction at Bisham Woods.

West Berks: extinct. Hinksey in 1699. There are nineteenth century records from Pangbourne [67], between Pangbourne and Streatley [57] in 1809 and 1886 and Moulsoford Downs [58], but no twentieth century records.

Orchis simia Lam. *Monkey Orchid*

grt 5 †

Woods on the chalk downs. Recorded from Caversham Hill north of the R. Thames in Oxfordshire v.c.23 by Sir Joseph Banks in 1778. "Among bushes on the rising ground to the west of the great chalk pit near Caversham, facing the Thames" (Bicheno, 1818). "At Whitchurch in 1839 when going over the ground late in summer, I was grieved and horrified to see the steep slopes pared and burnt in order to enrich the land with the ashes, and so I actually witnessed the roasting alive of both Soldier and Monkey Orchis" (Whitchurch 1881 in Druce's *Flora of Oxfordshire*).

East Berks: no records from the eastern chalk.

West Berks: recorded by Mr Brown (*Merrett's Pinax*) between Wallingford and Reading on the Berkshire side of the river in 1666. Streatley [5580] in 1879 (**OXF**). There are field records from Pangbourne [67] in 1860 and Streatley [58] before 1913, but no sightings since then. It is possible that some of the early sightings were errors for the famous Monkey Orchid site just over the river at Hartslock in Oxfordshire where Lady Orchid also grows (you can visit the orchid's web site at <http://hartslock.org.uk/>).

[*Aceras anthropophorum* (L.) W.T. Aiton *Man Orchid*]

There are no confirmed records of Man Orchid for Berkshire, but several errors found their way into circulation, including mis-identifications of Frog Orchid and Twayblade. There is a 1666 record in *Merrett's Pinax* from between Wallingford and Reading, repeated in the *Botanist's Guide* of 1805, and the 1854 list of Streatley plants by Pamplin. Morphological and molecular (Bateman *et al.*, 1997) evidence suggests that *Aceras* belongs in the genus *Orchis*.

Himantoglossum hircinum* (L.) Spreng. *Lizard Orchid

g 6 †

Satyrium hircinum L.

Orchis hircina (L.) Crantz

A *Red Data Book* species which *increased* its distribution markedly between 1900 and 1930. It was formerly restricted to Kent, but spread as far as Yorkshire in the north, and Devon in the west. It looks as if this increase was transient, and the distribution has since contracted markedly to just 2 large populations at Sandwich Bay in Kent and Devil's Dyke in Cambridgeshire. Since 1987, however, at least 7 new populations have appeared, so it is well worth searching for re-established populations in the Berkshire downs.

East Berks: no records from the eastern chalk.

West Berks: not in Druce. Tall, open chalk grassland; very rare, sporadic or extinct. Pitchpole Wood at Letcombe Bassett [3784] in 1936 (**OXF**), and Lollingdon Hill above Cholsey [5785] in 1921 (**OXF**) and 1979. There is a field record from Kingston Lisle [3287] in 1970. It is not known how these populations became established nor how long they lasted, but they may have been single, essentially casual establishments.

Ophrys insectifera* L. *Fly Orchid

grt 5 ↓

Ophrys muscifera Hudson

Woods and thickets on the chalk. One of our most charismatic orchids. Unaccountably rare in even our best chalk woodlands. Pollinated by wasps like *Argogorytes mystaceus* and *A. fargei*. Close to extinction if not already extinct, this species would repay a detailed survey. An obvious candidate for reintroduction at Bisham Woods.

NVC: M 13

East Berks: Hurley (1818), Cookham (1805), Bisham Wood (1897), Park Place, "in almost all the woods near Marlow" (Druce), Quarry Wood. Rare and decreasing. Remenham (1962). A candidate for reintroduction at Bisham. Still found just over the R. Thames in Oxfordshire to the west [77] and [78]. Atlas 2000: no records, apparently extinct

West Berks: much reduced, and now on the verge of extinction. Last seen in the summit beech wood on Kingstone Warren [3286] in 1961, the scarp ash wood at Uffington Wood [3087] in 1961 and 1981, and in Beech Wood at Hampstead Norreys [5376] in 1965. There are nineteenth century records from Ilsley [48], Ginge Brook [49], Streatley [58], Sulham and Basildon [67]. Still found just over the R. Thames in Oxfordshire to the north [67]. Atlas 2000: no records. Three plants were found by Bill Helyar in May 2002 on the western side of the railway-arch north-west of Pangbourne [623773].

Ophrys apifera* Huds. *Bee Orchid

grt 6

Ophrys trollii Hegetschw.

Ophrys apifera Hudson var. *trollii* (Hegetschw.) Reichb.f.

Ophrys apifera Hudson subsp. *trollii* (Hegetschw.) K. Richter

Ophrys apifera Hudson subsp. *jurana* Ruppert

Ophrys holoserica (Burman f.) Greuter

Chalk grassland, quarries, brick-pits, chalk downs, railway embankments, disturbed chalky ground: local, but springing up in odd places. Still relatively frequent in Berkshire. Self pollinating despite the elaborate, insect-like labellum.
NVC: CG 2,3,5

Ascot: a small population (2 or 3 spikes in most years) in the grassy triangle at the northern end of the racecourse [923699] since 1991. Not in Silwood Park.

East Berks: "In a plantation on the right-hand side of the road going from Hurley Bottom to Henley, and in a wood near the Druid's Temple in Park Place" (Druce). Quarry Wood. Rare and sporadic. Remenham (1955), Hurley chalk pit (3 plants in 1988 and 4 in 2004). In steep chalk grassland above Cock Marsh [887866]. It can appear almost anywhere, as in new roadworks leading down to the ferry over the Thames at Pennyroyal Field at Bray (May 1998). Chalk grasslands in the western Thames valley from Remenham to Cock Marsh; absent from the interior, and from the south and east. Recently at Crazies Hill, Ambarrow Court [825627], Hurley chalk pit, Winter Hill, in the steep chalk grasslands above Cock Marsh, Dinton Pastures, Bray. There were 12 spikes by the ride at Hut Hill [852654] on 10 June 2004. 1% (1km²). Atlas 2000: all except [76], [87]

West Berks: on the chalk, but uncommon in the centre of the district (e.g. rare in [48]), and on the oolitic limestone. Always very rare in the Kennet valley. Ashdown Park [2881], Buscot Park [2496], Compton Beauchamp [2887], Inkpen Downs [3562], in the orchid-rich grassland above the chalk pit at West Woodhay Down [388618] on 12 June 2004 (Plate 9), Whitehorse Hill [3080], Seven Barrows [3282], above Letcombe Bassett [3785], at both ends of the former runway of Greenham Common airbase [46] and [56], with about 100 plants at the western end in June 2001, including 5 spikes of var. *flavescens* in June 2002, AERE Harwell [4887], Chilton [4886], Cothill quarry [4699], Cumnor Hill [4704], Wytham hill top [4608], Brimpton gravel pits [5764], AWRE Aldermaston near Building C8 [5863], Streatley Hills House [5979], Burnt Hill [5674], Aston Upthorpe Downs [5483], Aston Tirrold [5586], Cholsey [592868], Lollingdon Hill [5785], Didcot Power Station [513916], Radley gravel pits [5297], Sutton Courtenay [508941], Barrow Hills [5198], Chilswell valley [5003], Decoy Heath [613635] 30 plants in June 2003, Burghfield gravel pits [66], 35 plants in June 2001. Atlas 2000: all except [47], [68], [69]