

PLANTATT

Attributes of British and Irish Plants: Status, Size, Life History, Geography and Habitats

for use in connection with the New atlas of the British and Irish flora

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Cover photograph shows the endemic plant Coincya wrightii on the cliffs of Lundy (courtesy of Roger Key, English Nature).

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INTRODUCTION

In the course of our research on geographical distributions and climate change, we have frequently wanted to characterize the plants that constitute the wild flora of Britain and Ireland. Several sources of information were available, including the *Electronic Comparative Plant Ecology* (Hodgson et al., 1994), the Czech clonal plant database *Clopla I (http://www.butbn.cas.cz/klimes/clopla I.htm)*, the BSBI database (http://www.bsbi.org.uk/html/database.html), the *Ecoflora* database (Fitter & Peat, 1994), and the indicator values of *Ellenberg* (Ellenberg et al., 1991). Inevitably, these sources were not sufficient for our purposes, and we have gradually assembled our own set of attribute data, linked to the database of the Biological Records Centre (BRC).

The establishment of the National Biodiversity Network (NBN) provided an additional stimulus to the assembling of attribute data, offering a suitable platform for online searches for species attributes. Some of the information published here is also available from the NBN gateway (www.searchnbn.net). In 2002, the publication of the New Atlas of the British and Irish Flora (Preston, Pearman & Dines, 2002), together with results of a companion project to analyse change (Preston, Telfer et al., 2002), allowed us to complete the dataset that is presented here.

The dataset is partly old and partly new (Table I). Biogeographic elements and Ellenberg values are taken with few modifications from earlier publications (Preston & Hill, 1997, 1999; Hill et al., 1999). Information that depends directly on the New Atlas is either new or (Change Index) is taken from the text of the New Atlas. Data on the Broad Habitats of plants are mostly drawn from an unpublished report (Preston et al., 2003). Information on plant height, perennation, life form and clonal growth was assembled from a variety of floras and monographs, with some personal observation; it is a new compilation. Further details of these attributes are provided in the following pages. The attribute categories are tabulated (Tables 2-13), with the numbe of taxa in each category listed in the column 'N='.

Table I. Attributes, codes and names listed as columns in PLANTATT

Column name	Abbre- viation	Source or other comment
(a) Status and taxonomic		
Taxon name		Name in current flora (Stace, 1997)
Family	Fam	Stace (1997)
Native status	NS	New Atlas (Preston et al., 2002)
Conservation status	CS	Cheffings (2004)
Rarity status	RS	Calculated from New Atlas data
Change Index	Chg	New Atlas (Preston et al., 2002)
(b) Size and life form		
Height (terrestrial)	Hght	Several sources, listed below
Length (aquatic)	Len	Several sources, listed below
Perennation	P1, P2	Mainly Clapham, Tutin & Warburg (1962)
Life form	LF1, LF2	Clapham et al. (1962), heavily revised
Woodiness	W	Mainly Clapham et al. (1962)
Clonal spread	Clone I, Clone 2	Sources are listed below; clone2 is mainly blank
(c) Geography & climate		
Major Biome (European distribution)	EI	Part of biogeographic element according to Preston & Hill (1997)
Eastern limit code	E2	Part of biogeographic element according to Preston & Hill (1997)
Continentality in Europe	С	Preston & Hill (1997) plus additions
Origin of alien taxa	Origin	New Atlas (Preston et al., 2002)
Number of 10-km squares in Britain (including Isle of Man)	GB	New Atlas (Preston et al., 2002)
Number of 10-km squares in Ireland	IR	New Atlas (Preston et al., 2002)
Number of 10-km squares in Channel Islands	CI	New Atlas (Preston et al., 2002)
January mean temperature	Tjan	Calculated from New Atlas plus climatic data
July mean temperature	Tjul	Calculated from New Atlas plus climatic data
Annual precipitation	Prec	Calculated from New Atlas plus climatic data
(d) Habitat		
Coastal	Со	Calculated from New Atlas plus Ellenberg salt value
Broad Habitats	Br Habitats	Preston et al. (2003), plus previously unreported data for aliens
Ellenberg indicator value	L, F, R, N, S	Hill et al. (1999)

SPECIES, FAMILIES, STATUS AND CHANGE

Species and families

The list of 1885 taxa includes all native British and Irish species, as well as natives of the Channel Islands not known from Britain or Ireland. There are no species restricted to the Isle of Man. All archaeophyte species are included, plus a number of well-established neophytes. A small number of subspecies, hybrids and aggregate species are also included. The number of taxa has been slightly increased from the 1791 that were listed for Ellenberg indicator values (Hill et al., 1999). Most of the additions are of neophytes, which, following the New Atlas (Preston et al., 2002), we now think to be sufficiently common or potentially interesting to be included.

The names of families have been abbreviated to four letters and follow Stace (1997).

Native/alien status

Species of uncertain status are classified as 'native or alien'. Introduced species have been classified as *archaeophytes*, *neophytes* and *casuals* (Preston et al., 2002). Both archaeophytes and neophytes are introduced species which are present in the wild as naturalized populations, that is they are spreading vegetatively or reproducing effectively by seed. An archaeophyte is a plant that became naturalized before AD 1500. A neophyte is one that was first introduced after 1500, or was only present as a casual before 1500 and is naturalized now only because it was reintroduced subsequently. In contrast to archaeophytes and neophytes, a casual is a plant that is present only as populations which fail to persist in the wild for periods of more than approximately five years. Such a species is dependent on constant reintroduction (Macpherson et al., 1996).

Hybrids between two alien parents which were introduced to the wild as hybrids (e.g. *Crocosmia* x *crocosmiiflora*, *Euphorbia* x *pseudovirgata*) are classified as neophytes. Only hybrids between which have been formed spontaneously in the wild between two alien parents are classified as 'AX'.

Conservation status

The conservation status of plants is coded according to the system proposed by Hodgetts, Palmer & Wigginton (1996); see also Palmer et al. (1997). This status is an assessment of threat rather than rarity, although closely related to rarity in that only species known at the time of the assessment in less than 101 10-km squares have been allocated to one of the categories listed. The status listed is that given by Cheffings (2004). This replaces the statuses provided in the Red Data Book (Wigginton, 1999) and Scarce plants in Britain (Stewart, Pearman & Preston, 1994). Cheffings assigns a conservation status to native species and archaeophytes, with only a few exceptions. PLANTATT cannot be used to provide a complete list of threatened taxa as many subspecies listed by Cheffings are not treated separately by us.

Rarity status

Rarity status is based on counts of the number of 10-km squares in Britain and the Isle of Man in which the plant was recorded as a native in the period 1987-1999. Rare plants are those recorded in 1-15 10-km squares during this period; scarce plants are recorded in 16-100. The thresholds were those that were used in defining rare and scarce species for the *Red Data Book* and *Scarce plants*. Rarity status, however, is solely a measure of rarity rather than threat, and is based on data from the *New Atlas*. Cheffings assigns a conservation status to native species and archaeophytes, with only a few exceptions. PLANTATT cannot be used to provide a complete list of threatened taxa as many subspecies listed by Cheffings are not treated separately by us.

Alien species have by definition no native records, and therefore are not given a rarity status.

Table 2. Native status, Conservation status and Rarity status

Attribute and codes	N=	Explanation
(a) Native status		
AC	12	Alien casual; many are crop plants
AN	259	Neophyte, alien introduced after 1500
AR	151	Archaeophyte, alien introduced before 1500
AX	I	Spontaneous hybrid between two alien parents
N	1362	Native, not endemic
NA	46	Native or alien (native status doubtful)
NE	47	Native endemic
NH	7	Spontaneous hybrid between two native parents
(b) Conservation status		
CR	20	Critically endangered
DD	T	Data deficient
EN	34	Endangered
EW	4	Extinct in the wild
EX	10	Extinct
VU	119	Vulnerable
(c) Rarity status		
n	933	Present, not rare or scarce
r	234	Rare (1-15 10-km squares in Britain, 1987-1999)
S	254	Scarce (16-100 10-km squares in Britain, 1987-1999)
o	27	Absent from Britain and Isle of Man as a native, but native in Ireland or the Channel Islands
х	12	Apparently extinct (not recorded since 1986)
i	2	Insufficient data available to assess rarity
(blank)	423	Alien taxa
(d) Change Index		
(values)		Change between 1930-1960 and 1987-1999

Change Index

The Change Index (Telfer et al., 2002) measures the relative magnitude of change, comparing the period 1930-1960 with 1987-1999. It is explained in more detail in the Appendix. It ranges from -4.78 for the critically endangered *Galium tricornutum* to 4.70 for the much more frequently recorded *Prunus laurocerasus*. The Change Index has not been calculated for species not included in the first *Atlas of the British Flora* (Perring & Walters, 1962). Consequently, several aliens such as *Amsinckia micrantha* and *Crassula helmsii*, which have increased spectacularly in the intervening period, lack a value for the Change Index.

SIZE AND LIFE HISTORY ATTRIBUTES

Height and length

Heights, measured in centimetres, are given for terrestrial (or emergent) plants and lengths (cm) for submerged aquatic plants. A few amphibious or emergent plants such as *Persicaria amphibia* are scored for both height and length.

These values are intended as a general indication of the size of the plant. For procumbent plants, heights are an indication of the height of the less procumbent shoots. For scapose plants and ferns, heights are not stem lengths but leaf lengths. Likewise, lengths for isoetids (i.e. linear-leaved rosette-forming rooted aquatics) are in fact leaf lengths. For example *Lobelia dortmanna* has length 4 cm, which is certainly not the length of the scape.

Height and length values were drawn from a variety of sources, which are detailed in the Appendix.

Perennation

The categories are annual, biennial and perennial. Biennial is used as a shorthand to denote also monocarpic perennials. For example *Carlina vulgaris* and *Heracleum mantegazzianum* normally take several years to reach maturity but are categorized as biennials. The sources of data for perennation are mostly the same as those used for height and length. In a few cases (e.g. *Linum catharticum*), we have relied on personal communication and scientific papers rather than floras.

A relatively small number of species fall into more than one of these categories. The secondary category is intended to be either less frequent or equally frequent. Thus *Poa annua* has primary perennation category PI=annual and secondary category P2 = perennial. Several floras suggest that *Cardamine flexuosa* and *Montia fontana* can be annual, biennial or perennial. These have been coded as PI = \mathbf{p} , P2 = \mathbf{a} and PI = \mathbf{a} , P2 = \mathbf{p} respectively.

Life form

The Raunkiaer system of life forms was set out by Clapham, Tutin & Warburg (1962), who listed life forms for most species. Their assignments provide an excellent starting point but contain numerous inconsistencies. Life forms have been fully revised for PLANTATT. Following German and Swiss authors (e.g. Lindacher, 1995), the category of helophytes or marsh plants has been omitted. The majority of these can grow in places that are not permanently flooded in winter. The position of the overwintering buds in such situations is taken as a guide to their life form. An additional life form of annual water plants has been added, so that the category therophytes are all terrestrial.

As with perennation, a secondary life form is given for some species. Details of how life forms were assigned and the relation of life form to plant height are given in the Appendix.

Woodiness

Woodiness is an attribute that applies to some chamaephytes, nanophanerophytes and phanerophytes. All other life forms are treated as herbaceous. Three categories are recognized, woody, semi-woody and herbaceous. Although we have been guided in part by Clapham, Tutin & Warburg (1962), we have not hesitated to express our own opinions where these differ.

Table 3. Size and life history attributes other than clonality; counts of primary attributes are in the column NI=, counts of secondary attributes are in N2=

Attribute or code	NI=	N2=	Explanation
(a) Height (cm)	Hght		Height (leaf length for scapose plants and ferns)
(b) Length (cm)	Len		Length (aquatic plants; leaf length for isoetids)
(c) Perennation	PI	P2	Primary and secondary type of perennation
a	455	14	Annual
b	96	14	Biennial, including monocarpic perennials
р	1334	42	Perennial
(d) Life form	LFI	LF2	Primary and secondary life form (see Table A1)
Ch	148	24	Chamaephyte
Gb	32		Bulbous geophyte
Gn	134	П	Non-bulbous geophyte (rhizome, corm or tuber)
hc	811	50	Hemicryptophyte
Ну	124	34	Perennial hydrophyte (perennial water plant)
Hz	25	1	Annual hydrophyte (aquatic therophyte)
Ph	108	15	Mega-, meso- and microphanerophyte
Pn	73	21	Nanophanerophyte
Th	430	14	Therophyte (annual land plant)
(e) Woodiness	W		
h	1651		Herbaceous
sw	27		Semi-woody
w	207		Woody

Clonality

Clonal growth is defined here as vegetative reproduction combined with lateral spread. Like perennation, clonality may have more than one value for a given species, reflecting the various ways in which clonal growth may occur. In some species there are varieties with clonal growth (*Arrhenatherum elatius* var. *bulbosum*, *Caltha palustris* var. *radicans*) while the normal form is not markedly clonal. In these two species, the variety with clonal growth is less frequent than the type variety, so that both plants are given Clone I = 0 (not spreading clonally) as the primary state, whereas Clone2 = DRg and Stol2 respectively. Two species with proliferous inflorescences really ought to have been assigned to three categories, namely *Juncus bulbosus* (Node2, Irreg and omitted DRi) and *Butomus umbellatus* (Rhiz2, DRg and omitted DRi). It did not seem worth having a third column just for these two, so the inflorescence character has been omitted.

Table 4. Categories of clonality; counts of primary attributes are in the column NI=, counts of secondary attributes are in N2=

Attribute or code	NI=	N2=	Explanation
(f) Clonality	Clone I	Clone2	
0	1228		Little or no vegetative spread
0gr	25		Tussock-forming graminoid, may slowly spread
0tb	26		Tuberous or bulbous, slowing cloning by offsets
DRa	20	10	Detaching ramets above ground (often axillary)
DRg	4	16	Detaching ramets at or below ground
DRi		11	Detaching ramets on inflorescence
DRI		I	Detaching ramets on leaves (Hammarbya)
DRp		I	Detaching ramets on prothallus (Trichomanes)
Frag	7		Fragmenting as part of normal growth
Irreg	38	17	Irregularly fragmenting (mainly water plants)
Leaf		- 1	Plantlets formed on leaves (Cardamine pratensis)
Nodel	19	20	Shortly creeping and rooting at nodes
Node2	76	9	Extensively creeping and rooting at nodes
RhizI	152	8	Rhizome shortly creeping
Rhiz2	209	15	Rhizome far-creeping
Root	37	3	Clones formed by suckering from roots
Stoll	14		Shortly creeping, stolons in illuminated medium
Stol2	26	5	Far-creeping by stolons in illuminated medium
Tip	5		Tip rooting (the stems often turn downwards)

The following comments may be helpful in distinguishing the clonal categories.

- I. The category **0gr** is rather poorly defined. If a perennial graminoid (grass, sedge or rush) is repeatedly mown or heavily grazed, it may gradually form clones, even though this is not the normal condition.
- 2. The category **0tb** assumes that the ground is little disturbed. If there is regular disturbance, the offsets will be dispersed to new sites and the plant would then be indicated as **DRg** (detaching ramets at or below ground).
- 3. The small category **Frag** applies to duckweeds and Azolla.
- 4. The categories **Node** (creeping and rooting at nodes), **Rhiz** (rhizomatous or with subterranean stolons) and **Stol** (stoloniferous in the illuminated medium, either air or water) are divided into two, according to whether they spread a short distance in a season or are far-creeping. For rhizomatous plants, a rule of thumb is that a species whose new shoots arise at a distance less than a quarter of the height of the plant is shortly creeping,

- while those that spread further are deemed to be far-creeping. Analogous distinctions are made for **Node** and **Stol**.
- 5. The distinction between **Node** and **Stol** is that in **Node** the horizontal or decumbent stem extends with indeterminate growth, rooting at the leafy nodes and not forming a new stem axis at each rooted position. In **Stol**, a new stem axis normally arises at the point of rooting, or the stolon is determinate, bending upwards and not progressing with indeterminate growth.
- 6. In the tip-rooting category, **Tip**, leafy stems that are not obviously stolons turn down at the apex and root there.

GEOGRAPHIC ATTRIBUTES

European and wider distributions, and continentality

The categorization of taxa to biogeographic elements and their designation as 'continental' or otherwise (Table 5) follow Preston & Hill (1997), with minor revisions and the addition of the hyperoceanic category from a subsequent paper (Preston & Hill, 1999). Elements are provided for native species and some archaeophytes; for archaeophytes the classification describes the archaeophytic range. In addition, some but not all alien species originating in Europe have also been assigned to biogeographic elements for PLANTATT and designated as continental. Geographic attributes are not provided for some hybrids.

Table 5. European and wider distribution, and continentality

Attribute and codes	N=	Explanation
(a) EI		Biogeographic element, major biome
I	82	Arctic-montane (main distribution in tundra or above tree-line in temperate mountains)
2	39	Boreo-arctic montane (in tundra and coniferous forest zones)
3	22	Wide-boreal (from temperate zone to tundra)
4	120	Boreal-montane (main distribution in coniferous forest zone)
5	244	Boreo-temperate (in conifer and broadleaf zones)
6	45	Wide-temperate (from Mediterranean region to coniferous forest zone)
7	621	Temperate (in broadleaf forest zone)
8	312	Southern-temperate (in Mediterranean region and broadleaf forest zones)
9	136	Mediterranean-atlantic (in Mediterranean region, and extending north in atlantic zone of temperate Europe)
0	15	Mediterranean (native range of some aliens)
(b) E2		Biogeographic element, eastern limit category
0	17	Hyperoceanic, with a western distribution in atlantic zone
I	207	Oceanic (in atlantic zone of Europe, not or scarcely reaching east to Sweden, Germany or S Spain)
2	148	Suboceanic (extending east to Sweden, C Europe or Italy)
3	577	European (extending to more continental parts of Europe but not to Siberia)
4	308	Eurosiberian (eastern limit between 60°E and 120°E)
5	114	Eurasian (extending across Asia to east of 120°E)
6	265	Circumpolar (in Europe, Asia and N America)
(c) C		Continentality
С	111	Species marked c are 'continental', i.e. they are rare in the atlantic zone of Europe but commoner further east

Native distribution of species alien in Britain and Ireland

The native distribution of aliens (Table 6) is taken from the *New Atlas*. This information is provided for neophytes and some archaeophytes. In Table 6, taxa present in two areas are included in both totals but taxa are excluded from the totals if they are only doubtfully native in the relevant area.

Table 6. Native distribution of species alien in Britain and Ireland

Code	N=	Explanation
Am	24	North America
Am4	22	Western North America
Am6	5	Eastern North America
As	10	Asia east of 60°E
AsI	24	Asia between 60°E and 120°E
As2	9	Asia E of I20°E
Aus	3	Australia
Crop	15	Crop plant, does not have a native range
Eur	149	Europe
Gard	13	Garden origin, does not have a native range
NHem	6	N Hemisphere (Europe, Asia and North America)
NZ	4	New Zealand
SAf	5	Southern Africa
SAm	20	South America and/or Central America
Unk	10	Unknown

Counts of 10-km squares in the New Atlas

For each taxon, the number of 10-km squares in Britain, Ireland and the Channel Islands is enumerated (Table 7). For most natives, only the native distribution has been counted (blue dots in the *New Atlas*). For the small number of native species in which it proved impossible even to attempt to delimit the native range in the *New Atlas*, the count is for all squares. For alien taxa, all squares with records have been counted. Squares have been counted without regard to date, so that *Otanthus maritimus*, extinct in Britain, is recorded from 23 squares there.

Table 7. Counts of squares and climatic means

Attribute	Min	Max	Explanation
(a) Counts			Counts of 10-km squares
GB	0	2805	Great Britain and Isle of Man
IR	0	985	Ireland
CI	0	14	Channel Islands
(b) Climatic means			Mean values for 10-km squares
Tjan	-1.3	7.0	January mean temperature (°C)
Tjul	10.4	17.0	July mean temperature (°C)
Prec	553	3218	Annual precipitation (mm)

Climatic means

Climatic values for plants were calculated as the mean climate of the 10-km squares where they occur in Britain, Ireland and the Channel Islands, averaging over the squares enumerated for the counts. Climate data for 10-km squares were taken from baseline climate summaries of the UK Climate Impacts Programme (Hulme & Jenkins, 1998). These baseline summaries were constructed by interpolation of daily weather measurements from individual met stations, averaged over the 30-year period 1961-1990 (Barrow et al., 1993).

HABITAT ATTRIBUTES

Coastal species

Species are deemed to be coastal if 80% of occupied squares are on the coast and if they depend on coastal habitat. Most coastal species have Ellenberg salt values (S values, defined below) greater than 0. Those with Ellenberg S = 0 were scrutinized carefully to ascertain whether their habitat was indeed coastal.

Broad Habitats

The preferences of species for Broad Habitats of the UK BAP are listed in the column labelled *Br Habitats*. Species' main habitat(s) are listed. No species is deemed to have a preference for more than four habitats. Minor habitats are ignored. For more information about Broad Habitats and species' preferences, refer to the Appendix.

Table 8. Coastal species and preferences for Broad Habitats

Attribute and codes	N=	Explanation
(a) Co		Coastal species
Co	145	At least 80% of occupied squares contain sea at high tide
(b) Br Habs		Broad Habitats
I	310	Broadleaved, mixed and yew woodland
2	32	Coniferous woodland
3	543	Boundary and linear features (eg hedges, roadsides, walls)
4	198	Arable and horticultural (includes orchards, excludes domestic gardens)
5	22	Improved grassland
6	163	Neutral grassland (includes coarse Arrhenatherum grassland)
7	218	Calcareous grassland (includes lowland and montane types)
8	89	Acid grassland (includes non-calcareous sandy grassland)
9	10	Bracken
10	83	Dwarf shrub heath (cover of dwarf shrubs at least 25%)
11	254	Fen, marsh and swamp (not wooded; includes flushes, rush-pastures, springs and mud communities)
12	41	Bog (on deep peat; includes bog pools as well as acid lowland valley mires on slightly shallower peat)
13	174	Standing water and canals
14	149	Rivers and streams
15	103	Montane habitats (acid grassland and heath with montane species)
16	292	Inland rock (heterogeneous - includes quarries, limestone pavement, cliffs, screes and skeletal soils over rock)
17	231	Built-up areas and gardens
18	74	Supralittoral rock (does not include maritime grassland)
19	135	Supralittoral sediment (strandlines, shingle, coastal dunes)
21	65	Littoral sediment (includes saltmarsh and saltmarsh pools)
23	I	Inshore sublittoral sediment (only Zostera marina)

Ellenberg's indicator values

Ellenberg defined seven major scales, of which five are presented here. The two that are omitted, T (temperature) and K (continentality), correspond quite closely to the major biome and eastern limit categories defined for European distributions by Preston & Hill (1997). Neither T nor K values are satisfactory in an oceanic climate such as that of Britain; those for K are particularly unreliable, especially as Ellenberg's definition was geographical rather than climatic.

The five remaining scales have values defined in the tables that follow. The values are based on those of Ellenberg et al. (1991). They are mostly reproduced from a previous publication (Hill et al., 1999), with some additions because of the extra species included here. A few example species are given for each value, by way of explanation.

Light values (L)

The full range of Ellenberg values for light (Table 9) is not represented in the British flora. For canopy trees, light values refer to the tolerance of the sapling stage of the life cycle.

Table 9. Ellenberg values for light (L)

Code	N=	Explanation
I	0	Plant in deep shade (no examples for Britain or Ireland)
2	4	Between I and 3 (Epipogium aphyllum, Neottia nidus-avis, Trichomanes speciosum)
3	20	Shade plant, mostly less than 5% relative illumination, seldom more than 30% illumination when trees are in full leaf (Galium odoratum, Listera cordata, Mercurialis perennis)
4	70	Between 3 and 5 (Circaea lutetiana, Lamiastrum galeobdolum, Poa nemoralis)
5	120	Semi-shade plant, rarely in full light, but generally with more than 10% relative illumination when trees are in leaf (Carex pendula, Hyacinthoides non-scripta, Primula vulgaris)
6	213	Between 5 and 7 (Anthriscus sylvestris, Digitalis purpurea, Teucrium scorodonia)
7	680	Plant generally in well lit places, but also occurring in partial shade (Arrhenatherum elatius, Carex flacca, Poa trivialis, Vicia cracca)
8	576	Light-loving plant rarely found where relative illumination in summer is less than 40% (Cardamine hirsuta, Orchis morio, Thymus polytrichus, Vaccinium oxycoccus)
9	202	Plant in full light, found mostly in full sun (Aster tripolium, Melilotus albus, Poa compressa, Primula farinosa)

Moisture values (F)

Unlike the other Ellenberg values, moisture is on a scale of 1 to 12 (Table 10). We use the abbreviation F from the German Feuchtigkeit.

Table 10. Ellenberg values for moisture (F)

Code	N=	Explanation
ı	3	Indicator of extreme dryness, restricted to soils that often dry out for some time (Corynephorus canescens, Helianthemum apenninum, Koeleria vallesiana)
2	28	Between I and 3 (Clinopodium acinos, Saxifraga tridactylites, Sedum acre)
3	168	Dry-site indicator, more often found on dry ground than in moist places (Asplenium trichomanes, Centaurea scabiosa, Spergularia rubra)
4	378	Between 3 and 5 (Arctium minus, Helictotrichon pratense, Iris foetidissima, Thymus polytrichus)
5	492	Moist-site indicator, mainly on fresh soils of average dampness (Anthriscus sylvestris, Euphorbia amygdaloides, Hyacinthoides non-scripta, Solanum nigrum)
6	226	Between 5 and 6 (Agrostis stolonifera, Empetrum nigrum, Rumex crispus)
7	141	Dampness indicator, mainly on constantly moist or damp, but not on wet soils (Carex ovalis, Dactylorhiza maculata, Pulicaria dysenterica, Ranunculus repens)
8	170	Between 7 and 9 (Cardamine pratensis, Equisetum telmateia, Phalaris arundinacea, Schoenus nigricans)
9	126	Wet-site indicator, often on water-saturated, badly aerated soils (Drosera rotundifolia, Myosotis scorpioides, Vaccinium oxycoccus, Viola palustris)
10	64	Indicator of shallow-water sites that may lack standing water for extensive periods (Alisma plantago-aquatica, Carex limosa, Ranunculus lingua, Typha latifolia)
11	34	Plant rooting under water, but at least for a time exposed above, or plant floating on the surface (Lemna minor, Nuphar lutea, Sagittaria sagittifolia, Schoenoplectus lacustris)
12	55	Submerged plant, permanently or almost constantly under water (Isoetes lacustris, Potamogeton crispus, Ranunculus circinatus, Zostera marina)

Reaction (R)

Reaction (Table 11) refers to environmental acidity, which would ordinarily be measured by pH. Except for water plants, R values reflect preferences for soil acidity.

Table II. Ellenberg values for reaction (R)

Code	N=	Explanation
I	10	Indicator of extreme acidity, never found on weakly acid or basic soils (Andromeda polifolia, Lycopodium clavatum, Rubus chamaemorus, Ulex minor)
2	50	Between I and 3 (Agrostis curtisii, Calluna vulgaris, Drosera rotundifolia, Polygala serpyllifolia)
3	61	Acidity indicator, mainly on acid soils, but exceptionally also on nearly neutral ones (Agrostis vinealis, Dactylorhiza maculata, Galium saxatile, Pteridium aquilinum)
4	127	Between 3 and 5 (Agrostis capillaris, Carex panicea, Juncus effusus, Teucrium scorodonia)
5	227	Indicator of moderately acid soils, only occasionally found on very acid or on neutral to basic soils (Cardamine pratensis, Cirsium palustre, Rubus idaeus, Ulex europaeus)
6	412	Between 5 and 7 (Ammophila arenaria, Carex sylvatica, Lolium perenne, Ranunculus ficaria)
7	698	Indicator of weakly acid to weakly basic conditions; never found on very acid soils (Agrimonia eupatoria, Atriplex prostrata, Nuphar lutea, Phleum pratense)
8	279	Between 7 and 9 (Artemisia vulgaris, Carduus nutans, Iris foetidissima, Viola hirsuta)
9	21	Indicator of basic reaction, always found on calcareous or other high-pH soils (Bunium bulbocastanum, Clinopodium calamintha, Dryopteris submontana, Primula farinosa)

Nitrogen (N)

Nitrogen values (Table 12) are in fact a general indication of preference for soil fertility. They are closely correlated with the stress values of Grime (1979, 2001), low N values corresponding to plants with high stress tolerance (Grime et al., 1997) and vice-versa.

Table 12. Ellenberg values for nitrogen (N)

Code	N=	Explanation
I	84	Indicator of extremely infertile sites (Agrostis curtisii, Clinopodium acinos, Drosera rotundifolia, Rubus chamaemorus)
2	323	Between I and 3 (Aira praecox, Carex panicea, Linum catharticum, Scabiosa columbaria)
3	286	Indicator of more or less infertile sites (Centaurea scabiosa, Galium saxatile, Pimpinella saxifraga, Teucrium scorodonia)
4	245	Between 3 and 5 (Agrostis capillaris, Cirsium palustre, Plantago lanceolata, Primula vulgaris)
5	342	Indicator of sites of intermediate fertility (Angelica sylvestris, Digitalis purpurea, Iris foetidissima, Trifolium pratense)
6	319	Between 5 and 7 (Cirsium arvense, Glyceria fluitans, Poa trivialis, Rumex crispus)
7	223	Plant often found in richly fertile places (Atriplex prostrata, Epilobium hirsutum, Stellaria media, Typha latifolia)
8	55	Between 7 and 9 (Beta vulgaris, Galium aparine, Lamium album, Urtica dioica)
9	8	Indicator of extremely rich situations, such as cattle resting places or near polluted rivers (Arctium lappa, Artemisia absinthium, Hyoscyamus niger, Rumex obtusifolius)

Salt tolerance (S)

Values for salt tolerance (Table 13) start at zero, corresponding to no tolerance of salt.

Table 13. Ellenberg values for salt tolerance (S)

Code	N=	Explanation
0	1605	Absent from saline sites; if in coastal situations, only accidental and non-persistent if subjected to saline spray or water (85% of the flora)
I	116	Slightly salt-tolerant species, rare to occasional on saline soils but capable of persisting in the present of salt (includes dune and dune-slack species where the ground water is fresh but where some inputs of salt spray are likely) (Calystegia sepium, Chenopodium album, Oenanthe crocata, Sedum anglicum)
2	28	Species occurring in both saline and non-saline situations, for which saline habitats are not strongly predominant (Atriplex prostrata, Elytrigia repens, Phragmites australis, Rumex crispus)
3	68	Species most common in coastal sites but regularly present in freshwater or on non-saline soils inland (includes strictly coastal species occurring in sites such as cliff crevices and sand dunes that are not obviously salt-affected) (Cakile maritima, Cochlearia officinalis, Juncus gerardii, Spergularia rupicola)
4	28	Species of salt meadows and upper saltmarsh, subject to at most only very occasional tidal inundation (includes species of brackish conditions, i.e. of consistent but low salinity) (Atriplex littoralis, Elytrigia atherica, Glaux maritima, Triglochin maritimum)
5	19	Species of the upper edge of saltmarsh, where not inundated by all tides (includes obligate halophytes of cliffs receiving regular salt spray) (Aster tripolium, Crithmum maritimum, Puccinellia maritima, Suaeda vera)
6	6	Species of mid-level saltmarsh (Atriplex portulacoides, Cochlearia anglica, Limonium vulgare)
7	3	Species of lower saltmarsh (Spartina anglica, Suaeda maritima)
8	4	Species more or less permanently inundated in sea water (Zostera spp.)
9	8	Species of extremely saline conditions, in sites where sea water evaporates, precipitating salt (Salicornia europaea agg.; these could equally well be treated as species of the lower marsh)

LISTING OF SPECIES WITH THEIR ATTRIBUTES

The listing of species with their attributes has 32 columns. Codes used in these columns are set out in the foregoing tables. The short and full names of the columns are given here (Table 14), as are the pages on which the tables of codes appear.

Table 14. Plant attributes cross-referenced to tables and page numbers where these are described more fully

Short name	Attribute	Table No	Page
Taxon name	Name in New Atlas	I	2
Fam	Family (4-letter abbreviation)	I	2
NS	Native status	2	4
CS	Conservation status	2	4
RS	Rarity status	2	4
Chg	Change Index	2	4
Hght	Height in cm (terrestrial)	3	6
Len	Length in cm (aquatic)	3	6
PI	Perennation - primary	3	6
P2	Perennation - secondary	3	6
LFI	Life form - primary	3	6
LF2	Life form - secondary	3	6
W	Woodiness	3	6
Clone I	Clonal spread - primary	4	7
Clone 2	Clonal spread - secondary	4	7
EI	Major Biome (European distribution)	5	9
E2	Eastern limit code	5	9
С	Continentality in Europe	5	9
Origin	Origin of alien taxa	6	10
GB	Number of 10-km squares in Britain (including Isle of Man)	7	П
IR	Number of 10-km squares in Ireland	7	П
CI	Number of 10-km squares in Channel Islands	7	П
Tjan	January mean temperature	7	П
Tjul	July mean temperature	7	П
Prec	Annual precipitation	7	П
Со	Coastal	8	13
Br Habitats	Broad Habitats	8	13
L	Ellenberg indicator value - light	9	14
F	Ellenberg indicator value - moisture	10	15
R	Ellenberg indicator value - reaction	- 11	16
N	Ellenberg indicator value - nitrogen	12	16
S	Ellenberg indicator value - salt tolerance	13	17

Taxon name	Fam	NS	CS	RS Chg	g Hght	Len	P1 P2 LF	I LF2	W Clone1	Clone2	E1	E2 C	Origin	GB	≅	ਹ	Fjan	Tjul	Prec Co	o Br Habitats	_	œ	z	S
Acaena novae-zelandiae	Rosa	Ν			1	1	p Ch		w Node2				Ans, NZ	82	6	0	3.8	15.2	831	3, 10, 18, 19	8	9 8		0
Acer campestre	Acer	z		n 0.3	.35 1500				0 %		7	က		1389	0	0	3.6	15.7	839	1,3	2	2 2	9	0
Acer platanoides	Acer	Z Z							0 %		7	ი ი		1419	43	2	3.4	15.2	903		4	2 2	7	0
Acer pseudoplatanus	Acer	A N		-0.40	ဗ				0 %		/	3	Eur	2599	942	13	3.6	14.6	1083	1, 3, 17	4			0
Aceras anthropophorum	Orch	z		s -0.76			p Gn		0 ч		თ	_		109	0	0	3.6	16.3	069	7	_	8	m	0
Achillea millefolium	Aste	z		n 0.29			b Ch		h Rhiz2		2	2		2774	896	14	3.5	14.5	1103	9	2	9 9		_
Achillea ptarmica	Aste	z		n -0.65							Ŋ	2		2382	492	0	3.3	14.3	1146					0
	Rann	¥		\vdash							^	ო		104	0	0	4.0	15.8	964	4,	2		ဖ	0
Aconitum napellus sens. lat.	Rann	Ϋ́		s 1.42					h Rhiz1		^	က		104	0	0	4.0	15.8	964	1, 3, 14, 17				0
Acorus calamus	Arac	AN		0.69	1		р Ну		h Rhiz2				Unk	515	17	4	3.6	15.8	770	13, 14	1			0
Actaea spicata	Rann	z		s -0.44			p Gn		h Rhiz1		4	9		33	0	0	2.5	14.3	1054	16	3	2 8	9	0
Adiantum capillus-veneris	Adia	z		s 0.54	30		p hc		0 ч		တ	_		38	29	4	5.2	15.2	1101	16	4	8		0
Adonis annua	Rann	AR VU	_	-2.19			a		0 ч		စ	_		234	က	7	3.8	16.0	745	4	7			0
Adoxa moschatellina	Adox	z		n -0.05					h Rhiz1		Ŋ	ဖ		1720	7	0	3.3	14.9	1005	_		2		0
Aegopodium podagraria	Apia	AR		-0.45	100		p hc		h Rhiz2		^	4	Eur, As1	2533	819	12	3.6	14.6	1064	3, 17	9			0
Aesculus hippocastanum	Hipp	Ν V		1.08	ო		p Ph		0 W				Eur	2186	222	12	3.6	14.8	1014	3, 17	2	2 2	7	0
Aethusa cynapium	Apia	Ϋ́		n -0.41	1100		a		0		7	က		1640	0	တ	3.6	15.5	863	3, 4, 17	9	7	ဖ	0
Agrimonia eupatoria	Rosa	z		n -0.89			hc		о Ч		ω	4		1859	532	თ	3.8	12.1	953	9		7		0
Agrimonia procera	Rosa	z		n -0.38			p hc		0 ч		^	က		819	161	ဖ	3.9	12.1	1026	1, 3, 6	ro	2		0
Agrostemma githago	Cary	AR E	ΕV	-0.75	75 100		a		0				Urk	815	96	2	3.9	15.6	852	4		9		0
Agrostis canina	Poac	z		L	09		p hc		h Stol2		2	9		1609	361	2	3.5	14.5	1128	11, 13	. 2	2 3	3	0
Agrostis canina sens.lat.	Poac	z		n 1.32					h Rhiz2	Sto12	Ŋ	9		1937	443	7	3.4	14.3	1145	8, 11	_			0
Agrostis capillaris	Poac	z		n 1.28	28 62				h Rhiz2		2	4		2758	922	13	3.5	14.5	1104	œ	9	5		0
Agrostis curtisii	Poac	z		n -0.26			p hc		0 ч		œ	_		207	0	0	6.4	15.8	1082	8, 10				0
Agrostis gigantea	Poac	AR		1.39	39 80		p hc		h Rhiz2		ø	2		1613	109	4	3.6	15.3	889	3, 4	7 (0
Agrostis stolonifera	Poac	z		n 3.66			b hc		h Stol2		9	9		2776	226	14	3.6	14.5	1101	4, 6	2			_
Agrostis vinealis	Poac	z		c					h Rhiz2		7	က		1126	150	0	3.3	14.0	1200	8, 10		9	7	0
Aira caryophyllea	Poac	z		n -0.52	52 25						ω	က		2046	929	4	3.7	14.6	1087	10, 16		2		0
Aira praecox	Poac			n -0.19			a				ω	7		2420	629	13	3.5	14.3	1149	8, 16	ω			0
Ajuga chamaepitys	Lami	NA VU	_	r -0.62			p hc		h o		ω	3		43	0	0	3.8	16.5	713	4, 7	, 2			0
Ajuga pyramidalis	Lami	z		s -0.34			p hc		0		4	က		106	ω	0	3.3	12.6	1425	10, 16		2	7	0
Ajuga reptans	Lami	z		n -0.56							/	က		2439	717	ო	3.4	14.6	1095	_	Ŋ			0
Alchemilla acutiloba	Rosa	z									Ŋ	ဗ		15	0	0	9.	13.2	696		` -			0
Alchemilla alpina	Rosa	z		Ŷ	.61 15						_	က		384	4	0		12.1	1843					0
Alchemilla filicaulis	Rosa	z		_	30		p hc		р 0		4	3		1407	308	0	2.9	14.1	1185	, 15,	8			0
Alchemilla glabra	Rosa	z		c	40		p hc				Ŋ	က		1271	223	0	5.6	13.4	1338	6, 15, 16	<u></u>	9	4	0
Alchemilla glaucescens	Rosa	z		s	-		p hc				Ŋ	ဗ		20	က	0	2.0	13.3	1408		_			0
Alchemilla glomerulans	Rosa			S	ĕ		p hc		0		7	က		22	0	0	4.0	11.5	1978	8, 15	_	5	4	0
Alchemilla micans	Rosa		_	_	40		p hc				Ŋ	ပ		4	0	0	2.0	13.5	1056	7				0
Alchemilla minima	Rosa	NE VU		r			p hc		h o		4	1		3	0	0	1.7	13.5	1667	7	7 (6 8		0
Alchemilla mollis	Rosa	N A			09		p hc		О Ч			-	Eur	802	17	-	3.5	15.0	1009	3, 17	9			0
Alchemilla monticola	Rosa			_	35		p hc		О		Ŋ	ပ (၁		တ	0	0	1.3	13.0	1084	9	, 	4	4	0
Alchemilla subcrenata	Rosa		Z W	_	35		p hc		0 ч		Ŋ	ပ		7	0	0	<u>ල</u>	12.6	1125	9	7			0
Alchemilla vulgaris agg.	Rosa	z		Ŷ	.01 35				0		Ŋ	ო		1935	496	0	3.1	14.1	1179	6, 7, 15, 16	<u></u>	2	Ì	0
Alchemilla wichurae	Rosa	z		S	20		p hc		р О		4	က		65	0	0	6.0	12.0	1992	7	7		က	0
Alchemilla xanthochlora	Rosa	z		_	40		b hc		0		7	က		1060	240	0	2.8	13.9	1174	6,7	9	9	4	0

Taxon name	Fam	SN	SS	RS	Chg	Hght L	Len P1	P2	LF1 LF2	2	Clone 1	Clone2	E1	E2 C	Origin	GB	≅	ᄗ	Tjan	Tjul	Prec	Co Br Habitats	_	R R	z	S
Alisma gramineum	Alis		S	_			30 p	L	>	_	0		_	9		4	0	0	3.5	16.2	612	13	7	11	4	0
Alisma lanceolatum	Alis	z		_	0.38	100		Í	>	ح	0			4		464	41	0	3.7	16.0	757	13	80	10	7	0
Alisma plantago-aquatica	Alis	z		_	-0.19	100	50 p		>	ح	0		ဖ	9		1761	624	ω	3.8	15.2	920	11, 13	7	10	7	0
Alliaria petiolata	Bras	z		L	0.03	120	q		0	ч	0		7	3		1990	367	6	3.6	15.1	935	3	2	9	8	0
Allium ampeloprasum	ij	AR			0.77	180	d		Э	ᅩ	otp	DRi	ဝ	_		99	24	9	5.5	15.5	1068	3	œ	4 6	2	0
Allium carinatum	≣	A			0.64	09	۵		ڡ	ح	otp	DR:			Eur	138	16	0	3.5	14.9	920	3, 17	ω	7	7	0
Allium cepa	≣	AC				100	۵		ڡ	ح	otp	DRg			Crop	43	0	0	3.9	15.8	823	4	7	7	ω	0
Allium oleraceum	≣	z		_	-0.24	80	۵		ڡ	ح	otp	DR:	7	ო		327	0	0	3.4	15.4	827	7	7	2	4	0
Allium paradoxum	Lili	AN			1.83	40	р		q	ч	Otb	DRi			Eur	316	10	0	3.2	15.1	810	1, 3	9			1
Allium roseum	ij	AN				22	d		a	۲	otb	DRi		ဗ	Eur	135	0	9	4.9	16.1	878	3, 16	7		2	0
Allium schoenoprasum	≣	z		ဟ	1.69	45	۵		٩	ح	Rhiz1		7	ပ		21	7	0		14.9	1052	16	ω		_	0
Allium scorodoprasum	ij	z		_	0.30	80	a		Э	_	otp		Н	Н		181	0	0		14.5	1000	1, 3, 6	9	2 9		0
Allium sphaerocephalon	Ξ	ΑN	Ш	_		80	٥		٩	_	otp			က		_	0	7	9.6	16.8	820	16, 17	တ		7	0
Allium triquetrum	Lili	AN			2.46	45	р		q	Ч	Otb		0	3	Eur	311	123	13	4.9	15.7	926	3	9			0
Allium ursinum	ij	z		L	0.24	45	d	<u>อ</u>	q	Ч	0		2	3		2034	371		3.5	14.8	1065	1	4	2 9	۷.	0
Allium vineale	≣	z		_	0.90	80	۵		ڡ	_	otp	DRi	7	ო		1197	82		4.0	15.6	884	3, 6, 7	/	2	9	0
Alnus glutinosa	Betn	z		_	-0.32	2000	۵		ح	≥	0		7	4		2478			3.5	14.5	1100	1, 14	Ŋ		9	0
Alnus incana	Betn	A				2000	٥	立	_	≥	0			ပ	NHem	714		0		15.0	984	1,3	ဖ			0
Alopecurus aequalis	Poac	z		_	-0.33	40	Ø	a L	h h	_	0		Ŋ	9		298			3.5	16.0	717	13	œ			0
Alopecurus borealis	Poac			s	-0.24	20	d		6	Ч	0gr		1	၁ 9		37		0	9.0-	11.0	1514	11	œ	9 2	3	0
Alopecurus bulbosus	Poac			v	0.30	59	۵		6	_	0gr		H	7		92			4.6	16.4	826	9	œ			က
Alopecurus geniculatus	Poac	z		_	0.83	40	۵		6	_	Node2		Ŋ	က		2598			3.5	14.5	1087	9	œ	2		_
Alopecurus myosuroides	Poac				0.42	80	a		_	_	0		Н	က		1071	9		3.7	15.9	765	4	9			0
Alopecurus pratensis	Poac			L	0.09	105	р		0	Ч	0		2	4		2424	738		3.5	14.7	1032	9	7			0
Althaea hirsuta	Malv	AN			0.11	09	а		ч	Ч	0		8	3	Eur	88	0		4.1	16.1	804	1,7	6	4 8	3	0
Althaea officinalis	Mal∧			S	-0.29	120	۵		O	_	0		_	4		125	0		4.4	16.4	774	13, 21	7			7
Amaranthus albus	Amar					9	Ø		_	_	0				Am	66	4	7		16.1	743	17	ω	2		0
Amaranthus retroflexus	Amar					100	a		_		0				Am, SAm	434	36			16.0		3, 4, 17	_			0
Ammophila arenaria	Poac	z		ᆮ	-0.26	120	р		O	ч	Rhiz2		80	ဗ		553	166	10	4.4	14.4		Co 19	ဝ			က
Amsinckia micrantha	Bora	AN				20	В		4	ᅩ	0				Am4	336		0	3.4	15.4	701	4	6	3 3		0
Anacamptis pyramidalis	Orch	z		_	0.55	22	۵		_	ح	0		ω	က		840	320	တ	4 .	15.5	861	7	ω			0
Anagallis arvensis	Prin	z			-0.73	20	a		ے	ح	0			4		1856	713	4	4.0	15.2	962	4	7	4	Ω	0
Anagallis minima	Prin	z		_	-1.16	2	В				0			က		532	87	7	4.2	14.8	1155	ო	ω			0
Anagallis tenella	Prim	z		ч	-0.54	2	ď		ပ		Node2		80	_		1281	636	တ	4.0	14.6	1139	11	œ			0
Anaphalis margaritacea	Aste	A N			0.07	100	۵			ح	Rhiz1				As2, Am	259	12	7	3.6	14.8	1167	1,3	ω	2	ო	0
Anchusa arvensis	Bora	AR			-0.70	20	a	۵	ч Н	ح	0		7	4		1514	75	13	3.7	15.0	874	4	7			0
Andromeda polifolia	Eric			_	0.0	32	۵		ے		Rhiz2		_	ၑ		222	152	0	3.3	14.4	1159	12	თ		_	0
Anemone nemorosa	Rann			_	-0.70	23	۵	ច	Ę	ح	Rhiz1		-	4		2305	541	က	3.3	14.5	1113	1, 16	Ŋ	9		0
Angelica sylvestris	Apia	z		ч	0.12	200	р		C	Ч	0			4		2726	968	2	3.5	14.4	1109	11, 16	7	8	2	0
Anisantha diandra	Poac				1.50	80	В		ч	Ч	0		_	3	Eur	307	9	12	3.9	16.0	728	3, 4, 19	2	4 5	4	0
Anisantha rigida	Poac				1.13	09	a		ے	_	0		H	က	Eur	97	0	7	4.1	16.1	209	3, 4, 19	∞		7	0
Anisantha sterilis	Poac	AR			0.05	80	а		ے	ح	0		H	က		1836	281	4	3.8	15.3	893	3, 4, 17	7	5	7	0
Anogramma leptophylla	Adia	z		0		7	a		_	_	0		၈	_		0	0	က	6.2	16.7	832	ည	7	2 8	_	0
Antennaria dioica	Aste	Z		ч	-0.88		р		ч	ч	Sto11			2		968	356	0	2.9	13.3	1379	7, 10	8	5 4	2	0
Anthemis arvensis	Aste	AR			-1.79	20	а		ے	ح	0		∞	3		969	19	7	3.7	15.6	797	3, 4	7	4	9	0
Anthemis cotula	Aste	AR			-1.60		a	È	ے	ح	0		-	က		1103	49	9	3.8	15.7	808	4	7	2	9	0

Taxon name	Fam	NS	CS	RS Chg	g Hght	Len	P1 P2	LF1	LF2 W C	Clone1 C	Clone2	E1 E2	2 C	Origin	GB	≅	ا ا	jan Tj	Tjul	Prec	Co Br Habitats	ats L	L	œ	S
Anthoxanthum aristatum		AN		-2.65		40	a	ᆮ	0 د			_	Eur	_		0	_		16.0	775	4, 17	_	4	4	2
atum		z				20	۵	2	ᆫ			6					4	3.5 14		1106	9	_	9	4	က
	Apia	z		n -0.16		70	а	Т	h 0				~						15.7	747	3, 4, 8	7		9	2
Anthriscus sylvestris	Apia	z		n -0.19	1	00	d	hc	р Р			2	-			805				1039	3	_		2	0 /
Anthyllis vulneraria		z		n 0.45		09	۵	2							1798					1030	7			7	
Antirhinum majus	Scro	AN		2.84		30	d	ပ	٥ ٢			H	Eur	L	1043	84	œ		15.7	837	3, 17	80	e 0	7	2
Apera interrupta		ΑN		3.0		40	a	ᆮ	<u>ہ</u>			_		ır, As1	104	0			15.9	671	3, 4, 16	0,		œ	
Apera spica-venti	Poac	AR		-0.21	21 100	8	a	ᆮ	0			ر 4	_						16.0	726	3, 4			Ŋ	
Aphanes arvensis		z		_		10	а	Тh	о Ч			_	~		1608					926	4, 16	8	3 4	9	
Aphanes arvensis agg.	Rosa	z		n -0.32		10	a	ᆮ	o د			7	~			629			14.7	1038	4, 8, 16	_	4	9	
Aphanes australis	Rosa	z		_	_	10	a	ᆮ	<u>د</u>			7	~			230				1070	8, 16	_		2	
Apium graveolens	Apia	z		n -0.63		8	۵	ဥ	<u>د</u>			8	_						5.8	849	13	∞	ω	_	
Apium inundatum	Apia	z		n -0.54		30 20	۵	ŕ	<u>r</u>	Irreg		7	6:		927	351			14.8	1023	11, 13	_		9	0
Apium nodiflorum	Apia	z		n -0.31		60 100	d	£	h	Irreg		-	_		1991	855	12	4.0 1	15.2	961	14		10	7	2
Apium repens	Apia	ပ z	S	_		15	۵	ဥ	Z C	Node2		7	~						16.4	651	13	0,		_	~
Aquilegia vulgaris	Rann	z		n 1.70		100	۵	2	<u>ح</u>			7	~		1504	197			15.0	986	1, 3, 16	9		9	
Arabidopsis thaliana	Bras	z		n 1.21		30	a	ᆮ	<u>ح</u>			7	_						14.8	1034	16, 17	w		9	
Arabis alpina	Bras	Ш Z	N EN	_		15	۵	<u>ნ</u>	<u>ح</u>			4	_						11.8	3218	16	_	ζ.	^	o က
	Bras	N V	[-	s -1.16	100	2	q	ည	0 ۷			7 4				0	_		16.0	989	80	_	'n	ø	
Arabis hirsuta	Bras	z		n -1.02		40	d d		0 د			5	·		1042	143			14.6	1104	7, 16	_	7	œ	
Arabis petraea	Bras	z		s -0.64		25	۵	<u>ნ</u>	o د			-	10			7	0			1966	15, 16	ത	_	œ	
Arabis scabra	Bras	2 2	5	_	(1	20	۵	占	<u>د</u>			ი ი	~		_	0			16.5	844	16			ω	
Arbutus unedo	Eric	z		0 1.18	18 500	2	۵	듄	o ≯			0				ω			14.4	1335	1, 16	9		^	
Arctium lappa	Aste	AR		0.51		Θ	q	2	0 ب			7 4				4	_		16.0	692	3	6		7	
Arctium minus		z		n -0.41		150	q	ဥ	o د			7	10		2424		4	3.7	14.7	1051	ღ	9	4	7	2
Arctostaphylos alpinus		z		s -0.22		0:	ď	ပ်	×	Node2		1	·^						11.6	1750	15	_		7	
Arctostaphylos uva-ursi		z		n -0.7		Ö:	۵	င်		Node2		4	·^		473			2.1 13	က	1615	10, 15	_		7	
Arenaria ciliata	Cary	z		0		9	d	ch	h 0			1	~		0	1			6	1454	15	6		8	
Arenaria norvegica	Cary	z		r 0.21		9	ра	ch	Th h o			1 3	~						3	1904	16	0)		8	2 0
olia		z		n -0.76		30	a	ᄕ										3.6	14.9			∞	ო	7	2
		z		0		20	۵	င်	<u>د</u>			8										w		9	
		z		n -0.14		5	۵	င်				ဗ							_		Co 18, 21	w		Ŋ	2
na				0.05	_	150	р	hc	h Rh	iz2			Crop	dc					15.6	820	3	8		7	
Arnoseris minima		AR EX	×	-3.72		30	а	ᆮ				7	~				0	3.6	16.1	685	4	_	4	ო	o ဗ
S		z		n 0.37	_	150	۵	ဥ	о Ч	۵	DRg		~					9	Ŋ	1089	3, 6	_	7	7	
		AR		-0.46		06	۵	င်	sw 0				_		1005				15.6	861	3, 16, 17	_		7	0
S.	Aste		Z H	r -0.42		09	۵	င်	sw Rh	liz1		7	ပ +		တ	0		ო	16.1	620	3,8	∞	<u>ო</u>	9	
Artemisia norvegica	Aste	N VU		_		8	р	hc	h 0			1	~		3			<u>ග</u>	10.9	982	15	3		4	1 0
Artemisia vulgaris	Aste	AR		-0.20	1	οč	d	hc	р Р			7 4			2109	489	12	7.	14.9	984	3, 17		4	8	0 /
Arum italicum	Arac	z		s 2.09		09	۵	Б	h Rhi	liz1		დ _			99	0	00	5.5	16.2	362	1,3	7	2	9	9
Arum maculatum	Arac	z		n -0.28		20	۵	Б	h R	liz1		7 3	~		1604	650	1	3.9	15.3	931	_	7	2	7	~
Asparagus officinalis	≡	z		n 1.7	_	ίδ	۵	ы	0 م			7			17	7	7	4	5.9	953	3, 18, 19	_	5	9	5
Asparagus officinalis																									
subsp.officinalis	ij	AR			15	20	۵	Gn	о Ч			7 4			287	7	4	3.8 16.	6.2	713	8		5	9	2
Asparagus officinalis			-			ç		Ċ	١			1			7	1	1	-	C	i c	6		`	C	,
subsp.prostratus	=) >	5	_	-	20	۵	5	0	-					1/1	7		5.9 15	ى ئ	920	18, 19	-	4	٥	n

Tavon name	Fan	ď	ď	S	H PH	Hoh	D1	D2 F1	71 F2	W Clone 1	Cone2	Ē	E2 C	Origin	a	<u>a</u>	<u>-</u>	Tian	III.	Drag	9	Br Hahitate	_	Ω.	z	ď
Asperula cynanchica	Rubi	z	3	_	_		_	-	i	ء :		<u> </u>))	329	47	_		၈	842			, ~	_		, 0
Asplenium adiantum-nigrum	Aspl	z		_		45	۵.	2				7	က		2146	708	4		14.6	1110	က်	16	9			0
Asplenium adiantum-nigrum sens lat.	Aspl	z			0.35	54	. 0	2		٥ د		∞	က		2146	708	4	3.7	14.6	1110	ო		9			0
Asplenium marinum	Aspl	z		ء	0.02	32	٥	2		0		ω	7		230	172	12	4.4	14.0	1261	S 8		တ	9	2	က
Asplenium obovatum	Aspl	z		s	-0.18	30	۵	ય		0 4		တ	 -		135	19	11		15.4	1197	16		2			0
Asplenium onopteris	Aspl	z		0		42	٥	2				တ	_		0	34	0		14.5	1200	1, 3,	3, 16	2			0
Asplenium ruta-muraria	Aspl	z		ء	0.15	12	۵	2		о Ч		^	ဖ		2184	898	=	3.7	14.7	1074	ḿ	3, 16, 17	^	3 7	7	0
Asplenium septentrionale	Aspl	z		σ	-0.08	15	٥	2		о ч		^	ო		22	7	0		13.2	1825	16		ω			0
Asplenium trichomanes	Aspl	z		ء	0.07	32	٥	2		0		ω	ဖ		2294	911	12		14.5	1121	m	3, 16, 17	2			0
Asplenium viride	Aspl	z		٦	-0.21	20	d	2		о Ч		4	9		435	43	0		12.8	1701	15	15, 16	4			0
Aster (alien N American taxa)	Aste	Ą				120	۵	2		h Rhiz1				Am	1211	23	2	3.7	15.3	934	'n	17, 21	_	5	ဖ	_
Aster lanceolatus	Aste	Ą				120	۵	2		h Rhiz1				Am6	211	2	0		15.8	844	m	3, 17	7			_
Aster lanceolatus x novi-belgii																										
(A. x salignus)	Aste	Z				120	۵	2		h Rhiz1				Gard	373	თ	0		15.6	88	რ	17	7	2	9	_
Aster linosyris	Aste	z		<u>-</u>	-0.10	20	٥	2		о ч		/	ပ က		တ	0	0	၈	15.8	1006	S 18			<u>ო</u>	_	0
Aster novae-angliae	Aste	ΑN				200	۵	h		h Rhiz1				Am6	83	0	_		16.1	908	က	3	7	2 2	9	0
Aster novi-belgii	Aste	Ą				120	٥	2		h Rhiz1				Am6	222	12	က	3.7	15.2	936	ḿ	17		2 9	9	_
Aster tripolium	Aste	z		ب ء	-0.44	100	۵	2		о Ч		^	Ŋ		703	267			14.8	1109	Co 51		တ	8	9	2
Astragalus alpinus	Faba	z	2	_		၉	٥	2		0		-	9		4	0			0.11	1275	7,	15		9		0
Astragalus danicus	Faba	z		ء	-0.88	8	٥	2		0		7	ပ ဖ		242	က			14.8	745	^					0
Astragalus glycyphyllos	Faba	z		ء	-0.36	100	a	2		о Ч		7	က		357	0			15.7	711	٦,	1, 3, 16				0
Athyrium distentifolium	Wood	z		s	0.38	စ္က	۵	2		о ч		-	9		86	0			11.2	2098	15			9	4	0
Athyrium filix-femina	Wood	z		ء	0.25	6	۵	2		о ч		വ	9		2574	849	12	3.5	14.4	1132	<u>-</u>	1, 16	2	7	9	0
Athyrium flexile	Wood	빌	2	_		20	٥	2		о ч		-	_		16	0			10.7	1753	15,	5, 16		9		0
Atriplex glabriuscula	Chen	z		u u	-0.93	33	а	Th		h 0		2	2		780	159			14.4	1163	Co 19				8	3
Atriplex laciniata	Chen	z		u	2.38	30	a	Th				2	1		418	95	13		14.8	626	Co 19			2 9	2	က
Atriplex littoralis	Chen	z			1.59	100	a	ᆮ				7	9		362	38	က	4.2	15.4	822	ပိ		တ	9	9	4
Atriplex longipes	Chen	z		v		8	a	느				4	က		33	0	0		15.6	982	ပိ					4
Atriplex patula	Chen			ء	-0.34	87	a	ᆮ				9	4		2318	787	12		14.8	1013		4		2 2		7
Atriplex pedunculata	Chen	z	CR	r		30	а	느		р 0		7	4		20	0	0		16.4	603	Co 21					2
Atriplex portulacoides	Chen	z		ء	90.0	8	٥	ፎ				တ	-		322	88	9	4.6	15.7	869			တ	80	9	9
Atriplex praecox	Chen	z		S		9	Ø	드				4	က		62	0	0		12.8	1503	රි					က
Atriplex prostrata	Chen	z			1.10	9	a	卢				ဖ	4		1847	349	വ		15.1	955	က်	3, 4, 19, 21				7
Atropa belladonna	Sola	z	Ī	ے	-0.33	120	٥	2				^	ო		414	0	0		16.1	717	1,3	3		4 8		0
Avena fatua	Poac	AR			1.17	150	a	⊥ ⊥		0 4				Eur	1556	170	2		15.4	849	œ,	4			7	0
Avena sativa	Poac	βÇ				120	a	ᄕ						Eur	728	131	4		15.4	903	4		_	2		0
Avena strigosa	Poac	AC		`1	-3.01	120	a	느		о Ч				Crop	270	72	9		14.6	1042	4		_	7 5		0
Azolla filiculoides	Azol	Ą		. 1	2.76		1 p	Ŧ		h Frag				Am4, SAm	099	71	တ		16.0	774	13,	3, 14				0
Baldellia ranunculoides	Alis	z		ے '	-1.08	20	20 p	Ŧ		о Ч	Sto12	œ	2		536	344	9		15.1	974	13,	3, 14	8	10	7	0
Ballota nigra	Lami	AR)-	-0.37	100	р	hc		h Rhiz2		8	3		1365	20	12		15.7	797	3					0
Barbarea intermedia	Bras	AN			1.92	09	q	hc						Eur	735	207	7		15.0	975	4		8	2 6		0
Barbarea stricta	Bras	Ą			0.50	100	٩			о ч		Ŋ	გ ი	Eur, As1	104	_	0		15.9	705	7	, 13, 14			ω	0
Barbarea verna	Bras	Ą		-	1.34	6	Ø	d T	ဥ	о ч				Eur	514	78	7		15.6	943	3	3		2	ဖ	0
Barbarea vulgaris	Bras	z	1	ء	-0.02	8	۵	<u>မ</u>	1	0		^	4		1869	615	က		15.0	943	ḿ.	4	/	9	ω	0
Bartsia alpina	Scro	z	1	<u>-</u>	-0.10	22	٥	h		h Rhiz1		_	က		18	0	0	0.4	6.	2069	7,	11, 15	ω	8	7	0

70000	2 0 1	U N	ú	O	, P	- 45 1	20	1 02	1	7	W/ Clono.	7	о П	L2	ciciro.	a	0	5	2	Ti.E	Drog	O Br Hobitote	-	Δ.	z	U
Rellis perennis	Acto		3	-	_	_		1	- - - - -	-		5	7	_	L	7797	984	2 4	2	14.5	1105	ة ا	, «	2 0	₹ 🔻	,
Borborio villagario	a 4	: 2		+		250	2 2	1	6	+			.) (1		077	. 00	-	7	. π 	Coa	, ,)	0	· C	0
Derberis valgaris	DelD	<u>د</u> ک	T	+		7 20	2 !	1	= <u>:</u>	- -			1	o (4 4	0 0	-	0 4 0		092	o	1 -	4 (1 0	O
Berula erecta	Apia	z	Ī	+		3	۵		Ê	7	\neg		<u> </u>	ກ		1111	292	-	o O	0.0	843) DL		>
Beta vulgaris	Chen	z		_		120	۵	٩	ပ္	_	о ч		თ	_		607	202	4	4.6	15.4	925	Co 18, 19	တ	2	∞	ო
Betula nana	Betn	z		s	60.0-	9	۵		- L	_	w Rhiz1		7	9		125	0	0	0.7	1.5	1585	10, 12, 15	7	~	_	0
Betula pendula	Betn	z		۔ د	-0.23 2	2500	d		Ph	_	0 M		2	4		2293	330	0	3.3	14.6	1073	1	7	5 4	4	0
Betula pubescens	Betn	z		_	0.40	2000	۵		씸	_	o ≽		2	4		2399	779	0	3.4	14.4	1123	_	7	7	4	0
Bidens cernua	Aste	z		د	-0.54	29	Ø		드	Ē	о Ч		7	ဖ		874	281	7	3.9	15.5	883	13, 14		6	^	0
Bidens tripartita	Aste	z		_	-0.43	29	a		드	Ī	о Ч		7	2		1055	222	Ŋ	3.9	15.5	884	11, 13	ø	8	^	0
Blackstonia perfoliata	Gent	z		_	0.12	45	a		ᄕ	Ī			თ	7		787	198	7	0.4	15.8	812	7			7	0
Blechnum spicant	Blec	z			-0.39	20	۵		ည	f	0 4		7	က		2159	831	တ	3.5	14.1	1198	1, 2, 10, 16				0
Blysmus compressus	Cybe	z			-1.28	37	. 0		ည	Ī			^	+	U	384	0		3.2	15.2	840				n	0
Blysmus rufus	Cype	z			-0.53	37	- Ω		þ		$\overline{}$		4	m		367	74		89	13.6	1371	Co 21		8		2
Bolhoschoenus maritimus	, C	z				0	_ c		ì	Ī	$\overline{}$	200	α	4		766	216		6	15.1	1020					4
Botrychium lunaria	Ophi	: z		+		5 5	2 0	ļ	E	f	\neg		ט רט	r (0		1109	138		30	13.8	1259	7.16	-	0 4	- 0	0
Brachypodium pippatum	Poac	z			0.15	6			j q	ľ			^	٥		612	24		36	15.9	745	7				C
Brachypodium sylvaticum	Dog	z		+	-0 17	S G	2 2			f	 -		.	. (2310	787		2	14.7	1062		\perp			- C
Brassina panis	E S	2		+	2 0 0	3 6	Σ α	ء	Т	د -	o c		-)	2	1778	144	1 1	. "	. r	914	- 2))	0
Diassica napas	2 2	<u> </u>		+		3 6	3 (+	Т	+			١	c	Gard	2 2	<u> </u>		5 6	. o	5 6	t, 2				0
Brassica nigra	DIAS	<u> </u>	T	+		2 5	ਲ		=	7	o		\	າ ເ		200	S '		O	0. 1	770	5, 4	0) ()	0	5
Brassica oleracea	Bras	ΑN		S		130	۵		Pn		_		ω	7		98	0		4.9	15.6	922	17, 18			∞	က
Brassica rapa	Bras	AR			0.74	100	В	<u>م</u>		h			7	4		1407	630		3.9	15.0	993		7			0
Briza maxima	Poac	Α				62	В		ᄓ	F	о ч		0	ო	Eur	239	4		4.6	15.8	932	3, 17, 19	7			0
Briza media	Poac	z		ا د	-0.75	62	٥		ဥ	Ē	h Rhiz1		_	က		1853	588		3.5	14.9	971	7				0
Briza minor	Poac	AR			0.28	22	a		ᄔ	F	о Ч		თ	-		92	0		5.2	16.1	919	4	_	5	Ŋ	0
Bromopsis benekenii	Poac	z		S	0.25	105	۵		þc	F	о Ч		7	ო	O	9	0		3.0	15.3	968	_				0
Bromopsis erecta	Poac	z		÷.	-0.01	110	. α		hc				_	\vdash		798	48		3.7	15.9	764	7				0
Bromopsis inermis	Poac	Z		+	1.71	120	۵		2	Ť	h Rhiz2			4	Eur. As1	263	0	0	3.6	15.9	757	. m		8	ß	0
Bromopsis ramosa	Poac	z		_		170	. Ω		ည				_	ო		1887	450		3.5	14.9	995		4			0
Bromus commutatus	Poac	z				92	- w		드				7	ო		675	33		3.9	16.1	772	m	7	8		0
Bromus hordeaceus	Poac	z		+	-0.37	80	a		드	Ī			∞	က		2406	830		3.7	14.7	1051	4.6	œ			0
Bromus racemosus	Poac	z		Н	0.74	92	a		모	f	о Ч		7	က		516	78		4.0	15.8	852	3, 6			ω	0
Bromus secalinus	Poac	AR		Ĺ	-1.15	6	a		드	F	о Ч			L	ž	403	19		3.9	15.8	816	4				0
Bryonia dioica	Cncn	z		د	-0.50	400	٥		ب ق	Ē	о ч		თ	7		1004			3.6	16.0	726	3	7	5	^	0
Buddleja davidii	Budd	Υ				200	٥		占		0			L	As	1434			3.9	15.4	930	3, 17	7			0
Bunium bulbocastanum	Apia	z		_	0.14	20	٥		٦.	Ē	о ч		ω	7		13			3.3	16.3	633	4	_			0
Bupleurum baldense	Apia	Z	EN	_		10	а		Ч	_	0 4		တ	_		3		l	6.1	16.5	808	Co 18, 19	6	3 8	7	0
Bupleurum falcatum	Apia	Α				100	۵		hc	Ē	0		ω	2	Eur, As	∞			3.4	16.0	277	3				0
Bupleurum rotundifolium	Apia	AR	ΕW	Ė	-4.58	30	В		ᄕ	F	о Ч				Eur?	287			3.8	16.0	753	4			4	0
Bupleurum tenuissimum	Apia	z		σ	-0.97	20	a		ᆮ	Ē	о Ч		ω	ო		161			4.2	16.4	684	9,6	တ	8	4	က
Butomus umbellatus	Buto	z		د	-0.04	150 1	150 p		主	Ē	h Rhiz2	DRg	7	4		685			3.7	16.0	715	13, 14	7 1	1		0
Buxus sempervirens	Buxa	z		r	2.54	200	d		Ph	_	0 M		စ	2		2			3.7	16.6	716	1, 3	4		2	0
Cakile maritima	Bras	z		د	-0.38	30	В		ᄔ	F	о Ч		ဖ	ო		276	131		4.4	14.6	1011	Co 19	တ	2 9		ო
Calamagrostis canescens	Poac	z		ا د	-0.33	120	٥		ဥ	F	h Rhiz2		2		v	293	0	0	3.4	15.7	723	1	_	6	Ŋ	0
Calamagrostis epigejos	Poac	z		_	0.47	200	٥		ည	Ē	h Rhiz2		2	2		936	თ		3.7	15.7	812	3, 11	7	7	ဖ	0
Calamagrostis purpurea	Poac	z		-		150	۵		ည	Ē	h Rhiz2		4	4		10	0		9.	13.1	1346	1, 11	7	8	ო	0
Calamagrostis scotica	Poac	NE/	ΛN	-		100	۵		hc	F	h Rhiz1		4	_		_	0		3.6	12.8	888	11	œ	9	4	0

Taxon name	Fam	NS CS		RS Chg	Hght	Len P	P1 P2	: LF1	LF2	N S	Clone1 C	Clone2	E1 E2	2 C	Origin	GB	≅	S Ţ	Tjan Tju	ul P	Prec C	Co Br H	Habitats	ш.	œ	S N
Calamagrostis stricta	Poac	z	<u> </u>				۵	ဥ		모	Rhiz1		2			22	ဖ	0	2.9 14		928	7		<u>ග</u>	4	7
Calendula officinalis	Aste	AN	Н		20		a	드						_	Unk	764	24				822	3, 17		8		2
Callitriche brutia	Call	z	_	_	22		a	ZH		Я Ч	Node2		9				ဗ	m		14.9	1087	13		8 10	2	2
Callitriche hamulata	Call	z	L			80	а		Η	h No	Node2 Irr	Irreg					282				1162	13, 14	4	7 11		5 0
Callitriche hamulata sens.lat.	Call	z	_		25		ар		Н	N N	Node2 Irr	Irreg	_	_			282				1162	11, 13,	3, 14	10	2	2
Callitriche hermaphroditica	Call	z	_	Н			۵	Ą		h	Irreg		4				115				1120	13		7 12	7	5
Callitriche obtusangula	Call	z	_	1.35			۵	Ť		h			8				157	4			840	13, 14	4	7 11	7	9
Callitriche platycarpa	Call	z	_	_	15	9	a o	Z	술	8 ч	ű	Irreg	7 3			1006	173			12.1	947	11, 13	_	6 10	^	0
Callitriche stagnalis	Call	z	_		15	09	a G	ZH	술	8 ч	Node2 Irr	Irreg	7	-		1488	346			14.6	1083	13		7 10	9	9
sens.lat.	Call	z	_		15		а	ΗZ	£	у Ч	Node2 Irr	Irreg	7 3	-			692	1		14.4	1105	11, 13,	3, 14	6 10	9	0
Callitriche truncata	Call	z	3,	s 0.47		20 8	a	ΡŹ		ە د	드	Irreg	0			52	-			16.1	719	13, 14	4	7 12	^	0
Calluna vulgaris	Eric	z	_	n -0.64	9		۵		占	o ≽	Ź	Node1	5	-			905		3.5 14	14.3	1157	10, 12	~	9	7	0
Caltha palustris	Rann	z	_	0.26 ر	4		۵	ဥ		о ч	รัง	Sto12	9			2636	802			14.4	1111	7		6	9	0
Calystegia pulchra	Conv	A		2.78	300		۵	ნ		모	Rhiz2				Unk	694	116		3.5 14	14.9	1020	3, 17		9	_	0
Calystegia sepium	Conv	z	_				۵	ъ		h Rh	Rhiz2		9 /			2175	881			14.9	1021	11, 14	4	7 8	7	7
Calystegia silvatica	Conv	AN		0.47	330		۵	မ်		노	Rhiz2			_	Eur	1790	344		3.8 15	15.2	933	3, 17		5	^	9
Calystegia soldanella	Conv	z	_	62:0- ر	8		۵	ច		도	Rhiz2		9			289	67			15.4	959 C	Co 19		9	^	4 ε
Camelina sativa	Bras	AR			100		a T	ᆮ	ဥ	о ч					Unk	248					793	4, 17		4	^	9
Campanula glomerata	Camp	z	_	-0.51	20		۵	ဥ		о ч			7 5	ပ		432				15.8	737	7		8	/	0
Campanula latifolia	Camp	z	_	0.23 ر	120		d	ဍ		о Ч			7 3			944	0		l	14.6	914	_		4	7	0
Campanula patula	Camp	z	"	s -0.77			a	ဥ		ە د			7 3	O		118					772	1,3		2	^	2
Campanula persicifolia	Camp	A		2.80	8		۵	ဥ		모	Rhiz1		7 3	O	Eur	369			3.5 15		825	1,3			^	9
ы		A A			8		۵	2	<u>ප</u>	노	Rhiz1			Ï	Eur	337	=				296	3, 17			/	
Campanula poscharskyana		AN					р	hc	占	h Rh	Rhiz1			Ш	Eur	451					927	3, 17			7	
sə				-1.24	80		۵	Gn		h Rh	Rhiz2		2 3		Eur	285	16			15.5	292	3, 17		6 4	2	
Campanula rapunculus	Camp	AR		-2.16			a	ည		о ч									3.5 15		719	3, 17		7 3	7	4
Campanula rotundifolia	Camp	z	_	-			۵	ဥ		모	Rhiz1		2								1104	7		7	2	
	Camp	z	_				۵	ဥ		о ч			-								753	_		4	_	9
storis	Bras	AR		-1.01			а	Th		р 0			6 4								1073	4, 17		7 5	7	7 0
Cardamine amara	Bras	z	-	n 0.00			d	hc			1		8 2			1117		0	2.9 14		943	1, 14		6 9	2	0 9
Cardamine bulbifera	Bras	z	0,	s 0.36			۵	မ်			Rhiz1	DRa	7 3	ပ							780	_			/	
Cardamine flexuosa	Bras	z	_		20		σ a		드	о ч									3.5 14		1110	_			9	
	Bras	z	_				a	ᆮ		о ч			8				791				1070	16		2	9	9
Cardamine impatiens	Bras	z	υ,	s -0.09			q	ဥ		о Ч			_								933	1, 3		9	ω	7 0
Cardamine pratensis	Bras	z	_				۵	ဥ			۲	Leaf	9				931	9			1104	6, 11		7	2	
	Aste	z	_				a	ဥ		о ч			7								832	ო		7	ω	0 /
	Aste	z	_				a	ဥ		о ч			7 4							15.7	797	6, 7		7	ω	2
Carduus tenuiflorus	Aste	z	_				ь		드	о ч			8					14		4	892	3,6		8	_	4
Carex acuta	Cype	z	_	_			р	hc	Η	h Rh	Rhiz2		5 4				87	0	3.5 15.	2	830	11		7 9	7	5 0
Carex acutiformis	Cype	z	L		_		d	hc	Η	h R	Rhiz2		7 4				195		3.5 15		889	11		6 /	2	0 9
ıquata	Cype	z	,	s -0.17			۵	ဥ		о ч			-	ပ —		38	13	0			752	7			-	4
	Cype	z	_				۵	ź	ဥ	도	Rhiz2		2			219					1255	11, 13	~	_		0
ia	Cype	z	_	n -0.27			۵	ဥ		도	Rhiz2		7 3			700	186			14.7	1063 C	ე 19		က	2	7
	Cype	z	υ,	s -0.02			d	ဥ		о Ч			2 6			22	0		-0.3 11	1.1	1980	15, 16	9	7 5	9	3
~	Cype	z	_	r 0.11	32		۵	ဥ		h Ogr	_		1			ß	0	0	-0.4	1.2	1917	11, 15		တ	7	က
Carex bigelowii	Cype	z	-	n -0.20			Ω	2		h Rhiz	liz1		1			402	42		1.8	2.1	1800	12		7	7	7

Taxon name	Fam	NS	cs	RS Chg	g Hght Len	Len P1	P2 L	F1 LF2	W Clone1	Clone2	E1 E2 C	Origin	GB	<u>⊼</u>	Cl Tjan	n Tjul	Prec	ပိ	Br Habitats	L	ď	S	
Carex binervis		z		n -0.17		٥			р 0		7 1		1927	647		က	0 1243	43	8, 10, 16	7 6	ო	7	0
Carex buxbaumii	Cype	N N	_	_	2		은		h Rhiz1		4 c		က	_	о Э	.3 13.5	5 1410	9	11	80	^	7	0
Carex capillaris		z		s -0.35	5 40	٥	은		h Ogr		9		120	0		1.2 11.9	9 1636	92	7	0	∞	7	0
Carex caryophyllea	Cype	N		n -0.20	0 15	d			h Rhiz1		7 4		1866	437 1	11 3	3.4 14.7	7 1079	62			2	2	0
Carex chordorrhiza		N N	_	_		۵							4	0		<u>+</u>	മ	92	11	6		က	0
Carex curta	Cype	z		n 0.17		٥			h Rhiz1		9		1190	219	0	13	6	ဌ	11		ო	7	0
Carex davalliana		Ш Z	X	×	22	٥	ဍ		о Ч		7 3 C		_	0		16	က	833	11	თ თ		7	0
Carex depauperata		N C	<u>~</u>	r		р	hc		h Rhiz1		9 2			1				823	3				0
Carex diandra		z		n 0.22		d	hc		h Rhiz1		9 2			294		3.6 14.4	1	42	11	8	2	3	0
Carex digitata		z		s 0.04		٥	은		ь О		5 3			0				829	1, 16				0
Carex dioica		z		n -0.35		٥			h Rhiz1		H			204			1404	4	11				0
Carex distans	Cype	z		n -0.47		۵	은		о Ч		დ 8			213			0 1039	၁၁					ω
Carex disticha		z		n -0.03		۵	은		h Rhiz2		7 4		1227	481		3.6 15.0		910	11				0
Carex divisa	Cype	z		s -0.35	2 20	۵	ધ		h Rhiz1		9 2					4.4 16.4		27	9			9	က
Carex divulsa	Cype	z		_	82	۵	은		о Ч		4		780					844	3, 6, 7	7		9	0
Carex echinata	Cype	z		n -0.75	5 40	٥	은		о ч		2					3.4 14.1	1 1207	20	11, 12, 14	80	ო	7	0
Carex elata		z		n -0.32		٥	Î	ဥ	о ч		7 5		294	225				903	11				0
Carex elongata		z		s 0.06	90		은		о Ч		5 4 c		72	18		.6 15.5		839	_	2			0
Carex ericetorum	Cype	z		s -0.46	17	۵	hc		h Rhiz1		5 4 c					.9 15.3	3 801	11	2				0
Carex extensa		z		n -0.23		۵	은		h Ogr		დ 8					.5 14.5	_	28 Co					4
Carex filiformis		z		r 0.23		٥	은		h Rhiz2		7 4 c			0				708	6, 7				0
Carex flacca		z		n 0.53		٥	은		h Rhiz2		က		2706				5 1104	2	7, 11	7 5			0
Carex flava	Cype	N N	_	_	2	۵	은		о Ч		2						7 1585	32	1, 11				0
Carex hirta	Cype	z		n 0.17	2 70	۵	ય		h Rhiz2		7 3			l		.7 15.0		963	9	7 7	7		0
Carex hostiana		z		n -0.05		٥	은		о Ч		7 3					3.2 13.8	8 1290	ജ	11			7	0
Carex humilis		z		s -0.01	10	٥	은		h Ogr		7 5 c		30	0		16.1		845	7				0
Carex lachenalii		z		r -0.22	2 20		은		h Rhiz1		9		ത		0	-1.1 10.4	4 1948	8	11, 15	8	4		0
Carex laevigata		z		n -0.01		٥	2		о ч		7 1							유	1, 16				0
Carex lasiocarpa		z		n 0.73	3 120	a		hc	h Rhiz2		9 4							33	11			ဗ	0
Carex limosa		z		n 0.14		۵		hc	h Rhiz2		9					3.3 13.4		31	11, 12	_			0
Carex magellanica		z		s -0.02		۵			h Rhiz1		9		131					8	12				C
Carex maritima				s -1.34		٥	ဍ		h Rhiz2		9		83	0				964 Co		8		7	m
Carex microglochin		N VU	_	_		ď	hc		h Rhiz2		1 3		1					32	11				0
Carex montana	Cype	z		s 0.68		٥			h Rhiz1		7 3 c		48		0	4.0 15.5	_	က္ထ	6,8	2 6		-	0
Carex muricata		z		_	82	٥					4							939	3, 7, 8	7	9	4	0
Carex nigra		z		n -0.01		٥	2		h Rhiz2		5 4			928		.5 14.3	3 1131	31	11	7 8			0
Carex norvegica		N N	_	<u>-</u>		٥	2		р О		1		9	0	0			5	15		_		0
Carex ornithopoda	Cype	Z		r 0.28	8 15	р	hc		h 0		4 3			0		2.1 13.8	1	72	7, 16	8		3	0
Carex otrubae		z		n -0.14	_	٥			р О		4			405	9			939	11	9		7	CI.
Carex ovalis	Cype	z		n -0.21		٥	<u>ب</u>		р 0		5 4		2422	743		3.4 14.3	3 1138	82	3, 10	7 7	5	4	0
Carex pallescens	Cype	z		n -0.51		٥	2		р О		5					.0 14.2		92	1	9	2	4	0
Carex panicea	Cype	z		г 6.		٥	2		h Rhiz2		2		2526			3.5 14.	3 1139	93	1	80	4	7	0
Carex paniculata		z		n -0.11	_	ď	hc	Н	h o		7 3			200		14.	9 1036	36	1, 11	9	9	9	C
Carex pauciflora		z		n -0.59		d			h Rhiz1		Н		377		0 1	1.7 12.	1 1789	စ္ထ	12	8	_	-	0
Carex pendula		z	П	n 1.30		۵			о ч		က		1409	305		3.9 15.	3	928	1, 14	ည	_	9	0
Carex pilulifera	Cype	z		n -0.04	35	۵	2		о ч		7 3		2111	441	က်	3 14	1	24	8	7	ო	7	0

Taxon name	В С	NO	ű	240	†qpH	00 00	5	E1	/\\ c=	Clone	Cond	E1 E2	ر	Grigin	a	Ω	Ë	Tish	i.i.	Droc	å	Hobitote	_	Ω	z	U
Carex pseudocyperus	Cybe	_			_	ב ב	1				_		L	20	672	2	-	_	0	4	_	Idbildis	- L			, 0
Carex pulicaris	Cype	z		n -0.51		٥			H	Rhiz1		7 2			1874	929	4			1239	7	16	8		7	0
Carex punctata	Cype	z	f	_			2	0	_			8			26	42		5.3			Co 18		6		က	က
Carex rariflora	Cype	z		r 0.28				O	ح	Rhiz1		1			17	0	0			1541	15		တ		0	0
Carex recta	Cype	N N	_	_		g.		c Hy	Н			4			4	0		3.1		936	11			7	2	ო
Carex remota	Cype	z		n 0.04		7 p			ᅩ			Н				675				1063	1, 14	4			9	0
Carex riparia	Cype	z		n 0.18		d C			/ h	Rhiz2		7 4				160				814	11,	14			7	0
Carex rostrata	Cype	z		n -0.19		d c	H	y hc	Ч.			9 5			1924	731	0	3.3 1.		1193	11		8 10	4	2	0
Carex rupestris	Cype	z		s 0.27	7 20			c)		Rhiz1		1 6			31	0			11.5	1699	15,	16			7	0
Carex saxatilis	Cype	z		s -0.35			2	O	ح	Rhiz2		-			7	0				2262	15				က	0
Carex spicata	Cype	z			82			O	ح	0		7 3			1043	84			15.7	823	, 6,	3, 7			4	0
Carex strigosa	Cype	z		n 0.60	30 72			O		0		7 2			417	102			15.7	841	1,	4			ဖ	0
Carex sylvatica	Cype	z		n 0.05				c	ᅩ	0		2 2			1899	809	2	3.6	14.8	1050	-				2	0
Carex vaginata	Cype	z		s 0.05				O	ح	Rhiz2					83	0	Ŀ		11.3	1904	15		9 /	ဖ	ო	0
Carex vesicaria	Cype	z		n -0.52			Î	2	ح	Rhiz1		2			913	230	_	w		1072	7				4	0
Carex viridula	Cype	z		n -0.0	11 60		2	c)		0		2			2337	822	თ	3.5	14.2	1169	7,	14, 19			7	0
Carex viridula	Cype	z			20		2			c		2			1168	434	~		13.9	1200		4	00	00	~	
Carex viridula																		+	,						ı	Т
subsp.oedocarpa	Cype	z			50		<u>ы</u>	0		0		5 2			2203	761			14.2	1194	4		80	4	7	0
Carex viridula subsp. viridula	Cype	z	П		25	O.		c c	ᅩ	0		Н			477	179		ω		1278	11,	19	8 7	_	က	_
Carex vulpina	Cype	N N	_	r -0.5				U	ᅩ			7 4	ပ		24	0	0		16.4	731	13		7		9	0
Carlina vulgaris	Aste	z		n -0.85	35 60			د د		0		H			1131	243		၈	15.3	947	7		8	7	7	0
Carpinus betulus	Betn	z		n 0.84	30	d C		Ļ	*			7 3			1488	25			15.4	895	1				9	0
Carpobrotus edulis	Aizo	AN		0.05		o D		ج	*	Node2			SAf		62	8			15.9		Co 18,	19		4	2	က
Carum carvi	Apia	AR		-2.22				O	ᅩ	0			Eur	?, As1?	303	9	7			898	3, 6	3, 6, 17			9	_
Carum verticillatum	Apia	z		n 0.2		٥		O	ᅩ			8			296	45				1578	1,	14			7	0
Castanea sativa	Faga	AR		0.5	Я			ے	>				Ш		1693	140	12	3.6	15.2	920	-		5	Ŋ	Ŋ	0
Catabrosa aquatica	Poac	z		n -0.69		2 p		y hc				5 3				304				936		14			7	_
Catapodium marinum	Poac	z		n 0.52	25 25			ے				0				172	4				Co 18		0	/	က	ო
Catapodium rigidum	Poac			n 0.3				ے				9				494			15.5	878	7,1	7			7	0
Centaurea calcitrapa	Aste		5	-2.3				6	ے	0		-	ъщ			-		4.0	6.1	744	ო				ო	0
Centaurea cyanus	Aste	AR EN	z	۰, P				ے	ے			7				20				836	ω,	1, 17			ည	0
Centaurea nigra	Aste	z		n -0.2		d C		္ပ	ᅩ							975				1093	6, 7				2	0
Centaurea scabiosa	Aste	z		n -0.49				S	ے	0		-			1239	125			15.6	832	6, 7		တ	ω	ო	0
Centaurium erythraea	Gent	z		n 0.03	3 20			<u>ر</u>	ے			က ထ				710					٧,	6			က	0
Centaurium littorale	Gent	z		s 0.03		9 9		c)	ᅩ			-	_			က					19	, 21			က	_
Centaurium pulchellum	Gent	z		n 0.10		о В		_	ᅩ			8				17					Co 21				က	_
Centaurium scilloides	Gent	N VU	_	r	15	5 p		ج	ᅩ	0		_				0				1170	10				2	0
Centaurium tenuiflorum	Gent	N N	n	L	32	5 a	Th	Ч	Ч			9 1			3	0			16.5		Co 18		9 8	2	4	0
Centranthus ruber	Vale	AN		1.15		d		엄		0			Eur			357			5.5	968	3, 1	6, 17, 18			2	_
Cephalanthera damasonium	Orch	z		n -0.94		g.	ō	ڃ	ᅩ	0		7 3			233	0			6.2	763	-		4	_	2	0
Cephalanthera longifolia	Orch	z		s -0.7		d C		: <u>:</u>	ᅩ			7 3			131	31		۲.	7	1166	-		5		4	0
Cephalanthera rubra	Orch	N CR	<u>~</u>	r		5 p		ے	ᅩ	0		7 3			10	0			16.2	797	1		4 3	ω	4	0
Cerastium alpinum	Cary	z	\forall	s -0.84	12	Δ	ਹ	ا ج				ر	-		1	0	0	0.4	4	2003	15,	16	വ	ဖ	7	0
Cerastium arcticum	Cary	z	+	ა -		2 2	υ υ	ج	_	Rhiz1		1	4		46	0		0.8	ლ ლ	2178	72	16	9	4	7	0

Tayon name	Fam	SN	C C		Ţ	D1	5	F1 F2	>	Clone 1	Cond	F1 F7	۲	Origin	G.	Ω		Tian	- I	Drag	S	Rr Hahitate	_	Ω	z	ď
Cerastium arvense	Carv		\vdash	-105	2	_	1 0	_	ء (_	_	-	-	50	814	39		~	_ m	~	α	-	- _	4	~	, 0
etalum	Carv	NA	+			- w	F					+	H	_	2	0	0	4	163	657	er.	2	-		2	0
	Cary	z	S	-0.05		2 0	: ნ			Node1		ა <i>–</i>	ì		29	0		4	10.8	1994	. 5		0 80	2	1 4	0
	Cary	z	_	0.38		o.	보		о Ч			7 3			1174	247	12		14.6	1062	S 18,	3, 19			က	_
Cerastium fontanum	Cary	z	_	1.40	30	۵	ნ		h R	iz1 Nod	de1	5			2805	982	4		14.4	1106	9			5	4	0
1	Cary		_	1.44		a	드		о Ч			8			2631	823	14		14.5	1079	3,6	2			2	0
ns	Cary	NE VU	_			٥			о Ч			4			2	0	0		11.5	1256	16				_	0
Cerastium pumilum	Cary	z	S	÷	11	а	Th		h 0			7 3			87	0	0		16.2	806	7				1	0
Cerastium semidecandrum	Cary	z	L		14	В	Th		0 4			2 3			1117	61	12		5.3	846	œ,	18, 19			3	0
Cerastium tomentosum	Cary	AN		2.97	8	۵	ਠ		h R	iz2 Nod	de2		Eur	<u>_</u>	1303	4	ω		5.2	898	'n	17, 19			2	_
Ceratocapnos claviculata	Fuma	z	_		75	a	드		о ч			7 1			1122	20	7		14.6	1111	<u>-</u>	6			Ŋ	0
Ceratochloa carinata	Poac	AN		2.09	80	٥	2		о ч				Ą	Am4	183	-	7		16.1	744	'n	4			9	0
à	Poac	AN		0.63	100	۵.	2		о ч				Am,	n, SAm	184	0	တ	4.2	6.1	796	'n	4	7	5	Ŋ	0
Ceratophyllum demersum	Cera	z	_	۱ 0.87		100 p	Ŧ		h Irreg	ğ		9			927	62	-		15.8	770	13	_	<u> </u>		7	_
Ceratophyllum submersum	Cera	z	_	0.39		100 p	Î			Di Di		4			208	က	Ŋ		6.3	705	13	_	7		ω	0
Ceterach officinarum	Aspl	z	_	-0.30		٥	2		٥ د						1093	787	တ		15.0	1061	'n	16			-	0
Chaenorhinum minus	Scro	AR		-0.63	3 25	a	卢		٥ د			7			1468	170	0		15.3	899	'n	4, 17	8	7	4	0
ım	Apia	z	_			٥	2		о ч			7			1786	0	2		15.4	890	ო		9		_	0
Chamaecyparis lawsoniana	Cupr	AN			4100	۵	H		o ×				Am4	n4	827	46	4		15.3	965	17				4	0
	Aste	z	_			٥	2		ь Ч	Node2					308	115	13		15.7	066	ω		ω		2	0
ur	Onag	z	_		150	٥	ြာ	2	h Root	ot		9			2603	920	9		14.5	1075	'n	17	9	9	Ŋ	0
Chelidonium majus	Papa	AR	_	-0.72		٥	얼		о ч			H			1662	220	တ	<u>~</u>	15.3	902	က		9	5	7	0
Chenopodium album	Chen	z	_	_	100	a	드		о Ч			9			2340	782	4	3.7	14.8	1018	4				7	_
Chenopodium album agg.	Chen	z	u	_	1	Ø	Th		0 4			9			2340	782	14	2	14.8	1018	4		1 2	2 9	2	_
Chenopodium bonus-henricus	Chen	AR	_	-1.79	20	٥	은						Eur	-	1363	8	-	4	15.2	883	က		۰ ۳	2	∞	0
	<u> </u>						É					1			Ç	C	(1	2		7	0	1	C	_
Chenopodium finifolium	Chen	2 0	S	, t	9 8	ro ro	= <u></u>	_	c c			^ L	+		35 745) <u>+</u>	7 L	4.6	7 0.7	710	هٔ ج 3	1.7	0 1		1 0	4 C
	т	۲ Q	+			ס מ	= =	+				- L			5 7	- (٠ (- 0	1 5	1 7			0 N	- c	י כ
,		AR A	+	-0.32	_	מ מ	卢					_	+		285	7 0	1 -	37.0	16.2	695	- 4			·	0 1	2 0
		AR	\vdash	-1.63		a	두					+			412	∞	13		16.0	797	4				7	0
ermum		AR	-	0.62		a	녿					7			866	ø	12		16.0	794	4		2	2	ω	0
Chenopodium rubrum	Chen	z	_		02	a	卢		о Ч			7			1267	142	ω		15.7	800	4,	11			ω	_
		AR		-4.57	_	а	Th		р 0			7 4			239	1	0		16.1	762	4				7	0
	_	AR VU		-2.60		Ø	Th		о Ч			_			180	0	9		16.1	752	Co 18,	3, 19		4 7	6	0
	Aste	AR		-1.80		a	드					8 3			1682	471	9		14.8	1022	4		2	9	2	0
alternifolium	Saxi	z	_	١ 0.62	20	٥	2		h Stol	212		\dashv			790	0	0		14.4	1042	7	, 14			9	0
ш							i										-									-
	Saxi	z :	_	-0.36		٥	5 i	ဥ	\neg	Node2		\dashv			2067	889	9	_	14.3	1168	<u>,</u>	1, 14			C)	0
is	Gent	z	S			Ø	드					9 2			99	37			15.6	1063	10				7	0
	Aste	> ×			130	٥	2			Rhiz2		4			4	0			10.5	1375	15	15, 16			9	0
ylla	Aste	A V				۵	2			Rhiz2			Eur	<u>_</u>	724	42			14.9	920	'n.	17			9	0
kpns	Aste	AR	+	-1.27		٥	2					8			1312	8	9	3.8	5.5	840	ო		°	7	Ŋ	0
	Apia	z	S	\dashv	120	۵	Î	-				2	ပ		139	139			4.8 8.	926	1,	, 13, 14	_	0	2	0
Circaea alpina	Onag	z	S		30	<u>α</u>	ত্র		h Rhiz	iz2		9			40	0			13.0	1836	_		4	2	2	0

Taxon name	Fam	NS	SS	RS CI	Chg Hght	tht Len	7	P2 LF1	I LF2	N Cic	Clone1 Cl	Clone2	E1 E2	ပ	Origin	GB	<u>∝</u>	ਹ	Tjan	Tjul	Prec	රි	Br Habitats	<u>Н</u>	œ	z
Circaea alpina x lutetiana (C. x intermedia)	Onag	Ξ		٥	0.48	45	۵	ъ		h Rhiz2	, z		7 3			570	49	0	2.7	13.4	1477	-		4	9	9
Circaea lutetiana	Onag	z		٩ -	-0.38	09	۵	Б		h Rhiz2	iz2		7			2053	748		3.7	14.9	1041	-		4	3 7	9
	Aste	z		<u>۹</u>		15	۵	ည		h Rhiz1	[Z]		7 3			734		က	3.7	16.1	742			ັ ດ	8	က
	Aste	z		٥ د		120	۵	Б		h Root	ŏ		7			2736			3.6	14.5	1092	က်	4, 6	80		9
Cirsium dissectum	Aste	z		۰ د		09	۵	hc		h Rhiz1	iz1		7 1			539	553	7	4.0	15.0	1043				8	7
	Aste	z		۰ د		120	۵	ဍ					-			447	0		3.6	16.0	745			80		2
ıyllum	Aste	z		<u>۹</u>		120	۵	ည		h Rhiz1	iz1		4			761			2.0	12.9	1476		16	'	9	2
Cirsium palustre	Aste	z		0		175	۵	ဍ		о ч			5 4			2697	922		3.5	14.5	1105		11, 14	~		4
Cirsium tuberosum	Aste	z	≥	0	0.41	8	۵	2		о Ч			8			17			3.9	16.1	882			80	8	ო
Cirsium vulgare	Aste	z		0	0.80	150	۵	2		о ч			7			2789	980	4	3.5	14.5	1103	m´	5, 6, 7			9
Cladium mariscus	Cype	z		0		200	۵	Η	g	h Rhi	iz1		8			232			4.1	14.7	1085			7		4
Claytonia perfoliata	Port	Ą		0	0.50	8	a	ᆮ		о Ч				Ā	Am4	704			3.6	15.6	768	4,	17, 19		6	Ŋ
Claytonia sibirica	Port	Ą		_	1.28	40	a	ᆸ	ဥ	о Ч				As	As2, Am4	1166			3.2	14.4	1092	٦,	က	ι,	9 2	9
Clematis vitalba	Rann	z		0		3000	۵	뭅		o ≯			7 3			954			4.0	16.0	815	ო				Ŋ
	Lami	z		-	-1.59	22	a	드		о Ч			7 3			551			3.6	15.8	778					_
Clinopodium ascendens	Lami	z		0 u	0.04	09	d	hc		h Rhiz1	iz1		7 3			657			4.2	15.9	854	ع	16		2 2	9
Clinopodium calamintha	Lami	z		o د	-0.31	09	۵	ဍ		h Rhiz2	iz2		9			129			3.7	16.4	641			œ		က
Clinopodium menthifolium	Lami	z	N N	_		09	۵	þc		h Rhiz1	iz1		7 3			_			4.8	16.3	844					2
Clinopodium vulgare	Lami	z		٩ _	-0.67	22	۵	þc		h Rhiz1	iz1		2 6			1317			3.5	15.4	880					4
Cochlearia anglica	Bras	z		0	0.02	40	۵	ည		о Ч			7 1			297			4.5	15.6	917	ပိ				9
Cochlearia atlantica	Bras	I NE	aa	L		20	d	hc		0 4			1			2			4.4	12.8	1830	တ			2 2	2
Cochlearia danica	Bras	z		n 3	3.31	25	a	ᄕ		о ч			7 1			588			4.5	14.9	1056	ა ზ	18			2
	Bras	빌		S		10	Q	b b		о Ч			1			32			0.2	11.4	2221			80	8 7	7
	Bras	z		_		30	۵	ည		о ч			3			1051			3.9	14.0	1246	ပိ	1, 21			2
sens.lat.	Bras	z		o u	-0.18	30	q	p hc		р Р			3 6			1245			3.7	13.9	1287					4
~	Bras	z		S		8	۵	p pc		о Ч						124			7.	12.9	1567		11, 16	80	80	က
e	Orch	z		۲ د	-1.34	22	۵	ē					\dashv			964			3.2	14.1	1148				9	7
sis	Bras	$\overline{}$			0.43	20	۵	2					8			61			4.2	14.8	1037		17, 19	_		က
	Bras	ш	₹			6	۵		ဥ				7				0		2.8	15.7	986	ပိ		0	4	က
O)	iii.	z	Ī	ې د	-0.14	35	۵	Б					7 3			301			3.6	15.8	809	9				4
S	Faba	Z Z				400	۵	둡					1	Ē		166			3.7	16.3	671	'ń	17		8	က
	Apia	A R		우		250	۵	ဍ					8			1847			3.0	15.2	915	က				
sn	Apia	z		٩ -	-0.19	9	۵	ဗ် i		o -			7			2520	_	^	3.5	14.5	1102	-	9	9	2	Ω.
	Kanu	Z :		\dashv		09 5	a	ر ک					+	Ē	_	360	4 (χ χ	16.2	/03	m΄.	4, 17			
	≡.	z		_		25	۵	g G			iz2		-			439	_[3.3	15.5	831	٦,	7			
S	Conv	z		ې د		9	۵	ษ			iz2		ω 4			1841	435		რ დ	15.2	929	ḿ.	4	,	4 8	ဖ
.so	Aste	Z Z		_		100	а	드						Am	۽	1048			9	16.0	766	က်	4, 17, 19	<u>,</u>	7	ဖ
	Orch	z		o s	0.61	22	۵	ē		о ч			4	ပ		102			2.5	13.5	926	۲,	2	ω ·	5	4
Coriandrum sativum	Apia	Α				20	a	ᄕ		о Ч				回	Eur?	201	7		3.9	16.0	763	ຕ໌	17	ω		2
ıea	Corn	z		n -0	-0.06	400	d	Ph		w Root	ot		7 3			1179			3.7	15.8	810	1,	3	7	5 7	9
	Corn	NΑ				300	۵	Pn	Ph	0 M		Node1		Am	u	421	111	0	3.5	15.0	936	1,	3, 17	9	9 /	9
	Corn	z		ᄋ	-0.42	20	۵	þc		h Rhiz2	iz2		2			218			6.0	11.6	1853		10, 15			7
	Bras	Α		_	1.77	18	a	ᆮ						S Y Y	논	1284		_	4.1	15.5	921		17	<u>ه</u>	5	^
natus	Bras	œ		0	0.33	25	a	ᄕ		о ч			က ထ			1290	149	တ	4.0	15.7	821	۳ ش	4			_
Corrigiola litoralis	Cary	z	CR	٠ ٩	96.0-	25	Ø	드		٥			8			2	0	0	6.2	16.0	1052	S 19		ω	2 2	2

Taxon name	Fam	SN	CS	RS		Haht Len	P P1	P2 LF	:1 LF2	≥	Clone1	Clone2	E1	E2 C	Origin	GB	2	CI	_ian	Lin	Prec	CoBr	Br Habitats	ш	œ	Z
Corylus avellana	Betu	z			-0.54				T	≥			7			2470	870	2		9	4	_		4		9
Corynephorus canescens	Poac	z		-	0.01	32	۵	ည		ء	0		ω	က		22	0	က		16.2	649	S 19		0	က	-
Cotoneaster bullatus	Rosa	Ζ				400	۵	문		>	C				As1	237	9	0		15.3	965	1, 3, 16	16, 17			0
Cotoneaster cambricus	Rosa		N EN			120	۵	ď		>	0		^	_	Eur	_	0	0	5.4	15.5	296	7, 16		တ	7	2
Cotoneaster horizontalis	Rosa	AN				100	р	Pn		Α	0			_	As1	855	63	2		15.5	933	3, 16,	3, 17			
Cotoneaster integrifolius	Rosa	A				100	d	Pn		>	0				As1	232	103	7		14.7	1194	3, 17	2	7 3	7	4 0
Cotoneaster microphyllus	2	2				ξ	•	ć							\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1	, C	C		7	7	,	1		1	
agg.	Rosa	Z Z		Ť,	1.04	3 8	ه ه	ב ב		\neg	5 0			+	AS1	2/0	3 5	J L		7. 6	11/4	λ, σ,	_ {	ر ب		4 4
Cotoneaster simonsii	Kosa	Z :			3.55	200	٥	ኗ .	<u>-</u>	\neg	0			+	As1	9/3	122	Ω :		2. 2.	1086), 16, 17			4
Crambe maritima	Bras			-	0.29	62	٥	ဍ			0		^	က		251	9	=		15.5	938	ე ე			∞	_
Crassula aquatica	Cras	N A	ΛN	٦			а	Hz		Ч		Node 1	7	၁ 9		2	0	0		14.0	1459	14				2
Crassula helmsii	Cras	AN					30 p	Hy	ch		reg	Node2			Aus, NZ	604	ω	80		15.8	826	13,	14	7 10		7
Crassula tillaea	Cras	z		s	98.0	2	a	느		ے	0		თ	7		104		11		16.2	734	က				7
Crataegus laevigata	Rosa	z		_		1000	۵	몬		>	0		^	က		297		-	3.5	16.2	674	-		5	7	2
Crataegus monogyna	Rosa	z		۲ د	. 92.0-	1000	۵	吊		>	C		7	က		2496	946	13		14.7	1073	1,3				9
Crepis biennis	Aste	z		۲ د	-0.02	120	۵	5		ء	C		^	က		288	0	0		16.3	711	9,0				9
Crepis capillaris	Aste	z		۲ د	-0.17	22	Ø	h Th	ρς	ے	0		7	က		2525	907	14	l	14.6	1074	7			7	4
Crepis foetida	Aste	AR	N EN			09	٩	a hc		ء	0		∞	4		33	0	7		16.4	707	Co 19		9		o က
Crepis mollis	Aste	z		`` _	-1.20	09	۵	hc		ے	0		7	က		75	0	0		13.2	1079	7				Ŋ
Crepis paludosa	Aste	z		۲ د	J.27	8	۵	hc		ے	C		2	က		1162	357	0		13.4	1334	11, 16	91		9	4
Crepis praemorsa	Aste	z	N E N	_		09	۵	h		ء	0		_	4		_	0	0	1.7	13.3	1333	7		တ	თ	က
Crepis vesicaria	Aste	Α			09.0	80	a	h		ے	0				Eur	1227	302	14	4.1	15.7	828	3, 5,	6, 17	8	7	7
Crithmum maritimum	Apia	z		_	0.23	42	۵	h		ء	0		თ	_		301	138	4		15.4	1042	S 18			/	Ŋ
Crocosmia aurea x pottsii (C.	7	2			7	8	1					, i			-	7	107	Ç	-	7	,		1			-
x crocosminiora)	ا	<u>z</u> :		+	ر ا -	3 8	م	5 .	_			D Z	ı	+	Gard	1440	ري (ا	7	5 0	0.4	671.	٦, ر ر	1,			4 I
Cruciata laevipes	Kubi	z :		\rightarrow	-0.77	09	٥	ဥ .	-		Rhiz2		^	4		1475	0	-		15.2	892	ဖ	- 1	9		D.
Cryptogramma crispa	Adia	z		۲ د	-0.63	15	d	hc		۷	0		4	က		466	23	0	œ	12.9	1678	10,	15, 16			က
Cuscuta epithymum	Cusc	z			-1.28	-	a	드			Stol2		ω	4		494	27	12		15.9	846	9		2	7	7
Cuscuta europaea	Cusc	z		s	0.04	7	Ø	느			Stol2		7	4		126	0	0	3.7	16.4	629	4		2		_
Cymbalaria muralis	Scro			1	-0.10	œ	۵								Eur	2059	619	4		15.0	066	3, 16,	3, 17, 19			
Cynodon dactylon	Poac	⋖	3	T _	-0.10	႙	۵	ည			hiz2	Node2	ω	2		7	0	0		15.6	1156	3, 5,	17	8		2
Cynoglossum germanicum	Bora	z	N	_ _	-0.52	22	Д	hc		ے	0		7	3		20	0	0		16.5	676	1				7
Cynoglossum officinale	Bora	z		د	-1.09	75	۵	ည			0		^	4		718	45	2	3.9	15.8	780	7, 19	_	8	∞	9
Cynosurus cristatus	Poac	z		_	0.02	72	۵	ဍ			0		7	က		2745	962	13		14.5	1103	9				
Cyperus fuscus	Cype		₹	٦ <u>-</u>	-0.32	20	a	Ļ			0		ω	4		7	0	7		16.6	758	13				
Cyperus longus	Cype			S	2.22	9	٥	hc			Rhiz1		ω	က		33	0	12		16.1	943	Ξ,	13			
Cypripedium calceolus	Orch	z	CR	r		30	р	Gn	_	h	Rhiz1		2	9 0		22	0	0		13.9	1270	7		5 4	8	
Cystopteris dickieana	poo∕W	Z	NΛ	r		20	d	hc		Ч	0		٤	خ		2	0	0		12.3	1379	16		2 2	8	2 0
Cystopteris fragilis	Wood	z		۲ _	69.0-	20	٥	h		ء	0		က	9		1118	191			13.5	1361	16		2	œ	4
Cystopteris montana	Wood	z		T _	-0.25	15	۵	ည			Rhiz2		4	ဖ		22	0			11.3	2151	7,	91	2	တ	2
Cytisus scoparius	Faba	z		_	0.00	200	۵	ď		>	0		/	က		2288	223			14.6	1085	က				4
Daboecia cantabrica	Eric	z		0	0.12	20	۵	<u>ნ</u>	<u>۔</u>	>	0		ω	-		0	ဗ္ဂ	0		14.4	1265	9			ო	0
Dactylis glomerata	Poac	z		٦ u	90.0-	120	d	hс) H	0		8	4		2707	981	14	3.6	14.5	1091	9		2 2		9
Dactylorhiza fuchsii	Orch	z		ے	0.33	20	۵	ษิ			0		^	4		2214	774	2		14.7	1063	7		~	^	က
Dactylorhiza incarnata	Orch	z		۲ د	-0.33	45	۵	Б	_	ے	0		Ŋ	4		1189	331	က	3.6	14.4	1127	7		စ	ဖ	7
Dactylorhiza lapponica	Orch	z		S	-	21	٥	တ်	_		0		4	က		18	0	0	7	12.5	1910	7		80	9	7

Taxon name	Fam	NS	CS	RS Cha	Haht Len	Len P1	P2 L	F1 LF2 W (Clone1 (Clone2	E1	E2 C	Origin	GB	2	Cl Tian	an Tiul		Prec	Co Br Habitats		<u>~</u>	z	S
Dactylorhiza maculata	Orch			_		_	G	_	_		2	4		2018	~	-	_	_	-	12		7	7	0
	Orch	z		r -0.41				ح				3		26	159		1.7 14.4		1237	11		2 2	က	0
Dactylorhiza praetermissa	Orch	z		n 0.84				_				_		1009	0		3.9 15.9		849	11		8	က	0
	Orch	z	П	n 0.47		۵	<u>ნ</u>				4	_		1202		0	3.1 13.5		1244	11	œ	8	7	_
ineri	Orch	z		s 0.78		<u>م</u>		ح				4		74	4		3.9 14.9		978	11				0
Damasonium alisma	Alis	N EN	_	r -0.52		а		Ч				1		54					707	13				0
Danthonia decumbens	Poac	z		n -0.40		d		0			2 2	3		2368					1160	7,8				0
	Thym	z		n 0.10		<u>α</u>		o ≯			ი ი	7		844	0	9	3.7 16.0		260	_		5 7		0
Daphne mezereum	Thym	Ϋ́		s -0.06	100	۵		>			-	4		110					890	_				0
Datura stramonium	Sola	N N		-0.71	100	a	드	ە د					Am?	801					962	17		7	∞	_
Daucus carota	Apia	z		n -0.59	100	a	2	ч 0			ω	4		1845	797	14			686	6, 7		7	က	7
Daucus carota subsp.sativus	Apia	AC			120	q	24	Ч					Crop	39	-		3.6 14.7		913	17	7	2 2	∞	0
Deschampsia cespitosa	Poac	z		n -0.09	_	۵	2	о Ч		DRi		9		2684	837	e e	3.5 14.4		1099	1, 6				0
Deschampsia flexuosa	Poac	z		n -0.22		۵	2	о ч	0gr		ro .,	က		2298	440				1177	8, 10	9	2		0
Deschampsia setacea	Poac	z		s -0.04		۵	2	ч 0			-	_		125	1				1211	12, 13				0
Descurainia sophia	Bras	AR		-0.29	100		౼	٥ د			,	4		929	31		3.6 15.6		738	4				0
Dianthus armeria	Cary	N V	_	s -1.31	11 60	В	드	ч			2 (3		206	7	8	l		805	3, 16	80			0
Dianthus deltoides	Cary	z		s -0.41		۵.		o ws			ro ,	م 0		223					797	7	∞			0
Dianthus gratianopolitanus	Cary	2 N	_	r 0.19	9 20	۵	당	o ws			H	ပ		2					979	16	တ			0
Diapensia lapponica	Diap	≥ ×	5	_	9		<u>ნ</u>	>			-	9		_			1.8 11.7		2845	15	တ	ω 4	_	0
Digitalis purpurea	Scro	z		n 0.72	7 150	q	2	٥ ٧			ω	7		2555			3.5 14.5		1120	တ (ဆ	9	4		0
ur	Poac	ΝΥ			32	В	드	ے					Eur, As	26					222	3, 4, 17	2			0
Digitaria sanguinalis	Poac	A N			20	a	드	ح	0			_	Eur	147		10 4	4.3 16.2		783	3, 4, 17	7	5		0
Diphasiastrum alpinum	Lyco	z		n -0.5		۵		SW	3hiz2		-	9		539					1686	15	7			0
Diphasiastrum complanatum	Lyco	z	Н	_				sw F	Shiz2		4	၁ 9		10					1465	10				0
Diplotaxis muralis	Bras	AN		-0.37		a	ı Th	h o					Eur	943					810	3, 4, 16, 17		4 7	9	_
а	Bras	AR		-0.13							7	3		282					290	3, 16, 17	8	2 2	9	_
	Dips	Ϋ́		_				모				က		1626					863	3, 6, 17	∞			0
n sens.lat.	Dips	ΑN									/	ဗ		1626			3.8 15.6		863	3, 6, 17	∞	7 7	_	0
	Dips	z		n 0.06	15						7			424	0	0				-	^	8		0
	Aizo	ΑN				۵		_	Node2			J)	SAf, Aus?	20					~	Co 3, 18, 19	o			က
lalianches	Aste	Z Z		0.89		۵			Rhiz1		-		Eur	882			3.1 14.8		921	1,3	4	2	2	0
S	Bras	z		_		۵						က		7					1191	16	œ	9		0
	Bras	z	1								7	က		225					1584	7, 16	ω			0
	Bras	z	+	s -0.17	(1)			٥ د			-	က		4					1151	3, 16	/	2	ဖ	0
~	Bras	z		s 0.00		۵					-	3		33					2311	15, 16	00	5 7	က	0
	Dros	z		n -0.85		۵					4	9		601	292		3.2 13.4		1422	11, 12	ω	9	_	0
	Dros	z		n -0.50	0	۵					-	7		208	198				1337	12, 14	œ	9	_	0
lia	Dros	z		n -0.56		۵		o u			υ O	9		1736	289				1269	12	∞	9	_	0
	Rosa	z		s -0.35		Δ.		>	Node2		_	9		66	52				1734	7, 16	∞	7	7	0
a	Dryo	z		n -0.04		d l		h o			7 (0		436	383		4.2 14.1		1373	1, 16	2	6 2	3	0
	Dryo	z		n 2.44		d		0 H				3		2272	286				1160	1, 16	2	9		0
iana	Dryo	z		n 1.06		۵		о Ч		Rhiz1	υ ,	4		1623	313	0	3.3 14.6		1075	-	9	8	4	0
	Dryo	z		r -0.68		۵		<u>د</u>				ე ე		31	0		3.6 15	<u>ග</u>	629	1	9	9	4	0
	Dryo	z	\forall	n 1.32		۵		ب م			7	က		2689	932	=	3.5 14	4	1114	1, 2	2	4	Ŋ	0
Dryopteris expansa	Dryo	z	\dashv	-	80	d	암	ب ا			4	9		247	0	0	1.7 12	0	772	1, 15, 16	7	3	7	0

	Drvo	' ? :											_			œ U	'n		בב	=	Prec	Co Br Habitats	1	r	c Z	
		7	1	2 -		120	۵	i မ	i	ے	0		/	9		2650	ø	 (C)	-	14.5	co	7	2	2	2	10
		z	H	ا 0	0.03	120	۵	2		ء	0		2	ဖ		2650	928	13	3.5	14.5	1096	1,2	2	Ŋ	D.	0
	Dryo	z		0	0.24	20	۵	2		ء	0		4	7		308	2	0	<u>6</u>	12.6	1810	15, 16		7	7	
	Dryo	z		×		80	۵	2		ء	0		4	က		_	-	0	2.7	13.4	1998	1, 2	9	4	4	0
Dryopteris submontana D	Dryo	z		s 0		09	۵	2		ء	0		တ	က		33	0	0	-	13.7	1527	16	8	თ	m	0
Echinochloa crus-galli P.	Poac /	AN		o.		120	a	┖		4	0				NHem	370	4	10		16.0	785	17		7	8	0
Echium plantagineum Ba	Bora /	AR EN	7	o.		29	۵	ဥ		ے	0		თ	_		79	0	7		15.9	848	4	6	2	2	0
Echium vulgare B	_	z		ا O	-0.24	06	۵	2		ء	0		7	4		1066	4	တ		15.6	822	7			4	_
Elatine hexandra	Elat	z		د	1.07	5 10	a	보 a	£	ء	0	Node1	_	က		212	62	က		14.2	1365	13	7 10	Ŋ	4	0
Elatine hydropiper	Elat	z		s 0	99.0	5 10	a	꿒		ء		Node1	2	4		33	19	0		14.7	1072	13	7 10		2	0
ris	Cype	z		n Ö	-0.11	10	۵	£	일	ح	Rhiz2		\vdash	9		366	89	_	3.6	15.2	924	13, 14	7 10	7	2	<u> </u>
Eleocharis austriaca C	Cype	z		_		09	۵	2		ح	Rhiz2		\vdash	က		14	0	0	4.	13.2	1348	13, 14	8	2	Ŋ	
S		z		0	0.47	35	۵	온		ء	0		7	7		962	330	7		14.0	1348	11, 12, 13	8		-	
		z		ا 0	0.91	09	۵	Î	은	ح	Rhiz2		ဖ	5			756	9	3.5	14.5	1098	11	_	ဖ	4	_
Eleocharis parvula		N >	_	г О	0.00	œ	۵	2		ح	Rhiz2		7	က		15	2	0	4.6	15.3	1130	Co 21	9	^	Ω.	m
eflora		z		n 0	0.02	30	۵	h		ے	Rhiz1		2	က		1236	267	4	3.1	13.5	1323	11		7	7	
		z		0	09.0	09	۵	은		ح	Rhiz2		7	ဖ			8	7	0.4	14.4	1182	11	8	/	4	m
		z		0	0.37	45	۵	Ì		_	Irreg		œ	_		888	286	က		14.2	1259	11	8	4	7	0
į,	Hydr /	AN		0	0.37	300	۵	£		_	Irreg				Am		424	က	3.6	15.1	936	13, 14	7 12	^	9	
Elodea nuttallii H	Hydr /	AN				300	۵	£		_	Irreg				Am	808	15	က	3.7	15.8	836	13, 14	6 12	^	_	_
Elymus caninus P	Poac	z		n 0	0.27 11	110	۵	2		٦	0		2	4		1669		0	3.3	14.9	981	1,3	2 6	7	80	
Elytrigia atherica	Poac	z		0	0.32	105	۵	은		ح	Rhiz2		œ	က				ω	4.6	15.9	_	Co 19, 21	9	^	9	₩
		z		ر م	-0.28	22	۵	은		ح	Rhiz2		ω	က		572	98	တ	4.	14.5	1050	Co 19			9	m
		z		n -0.01		125	۵	은		ح	Rhiz2		9	4		2530	837	5	3.6		1046	3, 4, 19				OI.
ш	Embe	z		ر م	-0.29	30	۵			3	Node2		7	ဖ				0		13.2	1381	10, 12, 15	2	7	-	0
ium		z		n -0.41		20	۵	2		ء	Rhiz1		-	က			-	0	1.0	11.9	1832	11, 16			4	0
Epilobium anagallidifolium O		z		ر م	-0.76	10	۵	온		ے	Stol1		-	9		236	0	0	6.0	11.6	1880	11, 15	80		n	
Epilobium brunnescens		AN		<u>-</u>	1.42	4	۵	2		ح	Node2				NZ		423	7	3.0	13.6	1357	14, 15, 16		4	n	0
Epilobium ciliatum		AN		က်	3.88	75	۵	2		ے	0				Am	2005	400	တ		15.0	972	3, 4, 17	2 6	ဖ	9	0
Epilobium hirsutum		z		ە 0	0.12	150	۵	2		ح	Rhiz2		∞	υ Ω		2036	795	12	89.	15.0	971	11, 14	7 8		<u></u>	0
Epilobium lanceolatum		z		n 0.		09	d	hc		Ч	0		6	2				12		16.0	937	3, 16, 17	2 2		2	
,		z		n Ö		75	۵	ည			0		7	က				9		14.5	1091	3, 16, 17			9	$\overline{}$
n		z		n 0		75	۵	ည		ے	C		7	က			758	ω	2	14.5	1104	11, 14	9		2	$\overline{}$
Epilobium palustre		z		n Ö	-0.18	09	۵	ည		<u>ح</u>	Rhiz1		2	9			812	က		14.3	1146	11, 14	7 8	2	<u>د</u>	$\overline{}$
rum		Z		n -0.		75	d	hc		Ч	0		7	3		_	824	11	8	14.9	966	11	7 9		2	0
Epilobium roseum		z		n Ö	-0.25 7	22	d	h		ч	0		7	4		937	24	0		15.5	893	1, 3, 14, 17	8 9	2	2	0
Epilobium tetragonum O	Onag	z		⁻.	1.66	75	۵	2		ء	C		^	4		1171	0	_		15.9	834	3, 17	2 9	Ŋ	2	$\overline{}$
Epipactis atrorubens O	Orch	z		s 0		30	۵	ნ		ء	0		2	4		09	13	0	3.0	13.8	1328	16	7	∞	-	_
Epipactis helleborine O	Orch	z		ء 0		80	۵	ნ		ے	0		7	υ Ω		1218	161	0	3.6	15.3	946	1,7	4	/	4	0
Epipactis leptochila O	Orch	z		s O	0.26	09	۵	ნ		ء	0		7	က		88	0	0	3.6	15.7	808	_	ω 4	တ	4	0
Epipactis palustris	Orch	z		n -O	7 68:0-	45	d	Б		ч	Rhiz2		7	4		447	160	3	3.9	15.3	915	11	8	2	3	
Epipactis phyllanthes	Orch	7		s 0	0.19	42	۵	ნ		ء	0		7	က		134	တ	0	3.8	16.0	774	_	3	^	4	0
	Orch	_		ا م	-0.08	65	۵	ြာ		ء	0		7	က		235	0	0	3.6	16.3	728	_	2	ω	4	0
Epipactis youngiana O	Orch	NE EN	7	_		09	۵	ნ		ء	0		7	_		10	0	0	2.8	14.3	820	_	8	2	m	0
1		N CR	<u>د</u>	×		22	d	G		ᅩ	Rhiz2		4	2			0	0	3.6	16.1	721	1	2 5	7	4	0
Equisetum arvense	Equi	z		n 0.	66.0	8	۵	Б		_	Rhiz2		က	9		2666	921	12	3.5	14.5	1087	3, 4	2	9	9	0

Taxon name	Fam	NS	CS	RS Chg	ng Hght	ht Len	7	P2 LF1	LF2	× ∨	Clone 1	Clone2	E1 E2	2 C	Origin	GB	<u>∝</u>	<u></u>	Tjan	Tjul	Prec	ပိ	Br Habitats	7	<u>~</u>	z	တ
Equisetum fluviatile	Equi	z		ن O		100	۵	ษิ	£	호	Rhiz2		5	_		2494	847	ω		14.4	1116	_		ω	10	4	0
Equisetum hyemale	Edni	z		ا 0		100	٥	Б		노	Rhiz2		5	_		238	112	0		14.0	1108	_	, 11, 14	2	7 7	2	0
Equisetum palustre	Edni	z		ص 0		09	٥	Б		호	Rhiz2		5			2534	704	ω		14.5	1091	_	_	7	8	9	0
Equisetum pratense	Equi	z		s 0.	0.11 (09	р	Gn		h R	Rhiz2					170	32	0		12.7	1406	1	1	7		5 4	0
Equisetum ramosissimum	Equi	AN				120	d	Gn		h R	Rhiz2		_		Eur, As	2	0	0		16.3	740	9		8			0
Equisetum sylvaticum	Edni	z		۰ P		06	٥	Б		노	Rhiz2		5	_		1561	334	0		13.7	1269	_	1, 16	2	80	5	0
Equisetum telmateia	Edni	z		ن. O		180	٥	Б		호	Rhiz2		_			1248	426	က		15.2	920	7	_	9			0
Equisetum variegatum	Edni	z		s O		09	٥	Б		노	Rhiz2		Н			170	129	0		14.0	1224	11	1	ω	8		0
Eranthis hyemalis	Rann	¥		<u>–</u>	1.59	15	۵	Б		о ч				ш	Eur	614	0	0		15.6	716	_	1, 3, 17	က			0
Erica ciliaris	Eric	z		r -0.11		09	d	ပ်	Pn	0 M			8			19	0	0	2.2	15.9	1011	1	10, 12	8		1	0
Erica cinerea	Eric	z		n -0.94		09	۵	ភ	돈	o ≯			7			1999	712			14.0	1226	-	10			(1	0
Erica erigena	Eric	z		0	_	120	۵	돈		o ≥			ω ~			0	24	0		14.0	1395	-	10, 13, 14		80	2	0
Erica mackaiana	Eric	z		0		09	۵	ర్	듄	o ≥			7			0	10	0		13.7	1593	-	10, 12	ω		_	0
Erica tetralix	Eric	z		n -0.91		09	۵	ਹ	듄	ĕ ≥	Node1		7			1962	781	7	3.4	14.0	1230	-	10, 12			_	0
Erica vagans	Eric	z		r -0.07		80	۵	Pn		0 ×			8			9	_	0		15.5	1047	_	10			4	0
Erigeron acer	Aste	z		<u>.</u>	0.33	20	a	ч Ц	2	ە د			5			974	8	2		15.9	774	က	3, 16			6	0
Erigeron borealis	Aste	z	3	r -0.11		20	٥	ਨ		٥ د			4			10	0	0		10.6	1653	-	15, 16			7 2	0
Erigeron karvinskianus	Aste	Ą		2.	2.37	25	٥	ਠ		٥ د				Ŋ	Am	292	34	7		15.9	904	က	, 16, 17		ر ا	(1	0
Erinus alpinus	Orob	Ą		-		20	٥	ਨ		ە د				ш	Eur	341	22	-		14.5	1121	က	3, 16		8		0
Eriocaulon aquaticum	Erio	z		ا 0.	0.18	20		H		노	Rhiz1 D	DRa	H			∞	70	0		14.1	1435	13	3	8	1	4	0
Eriophorum angustifolium	Cype	z		ا أ	-0.79	09	۵	2		호	Rhiz2		9			2134	831	4		14.1	1194	12	2			4	0
Eriophorum gracile	Cype	z	2	ب م	-0.20	09	٥	ဥ		호	Rhiz2			O		17	14	0		15.4	1006	1			9		0
Eriophorum latifolium	Cype	z		0		09	۵	2		호	Rhiz2		5			575	19	0		13.6	1394	1			6	2	0
Eriophorum vaginatum	Cype	z		ر م	-0.36	20	۵	2		h Ogr	٦ť					1516	260	0		13.6	1307	-	2	ω		7	0
Erodium cicutarium	Gera	z		_		40	ø	드		о Ч			8			1666	167	14	3.8	15.2	902	19	0	ω	4	6	0
Erodium cicutarium agg.	Gera	z		n -0.11		40	a	ᆮ		о ч						1666	167	4		15.2	902	-	o	ω	4	4	0
Erodium lebelii	Gera	z		s		15	a	ᆮ		о Ч			Н			74	13	က		15.5		Co 19	6	ω	7	2	0
Erodium maritimum	Gera	z		n 0.		20	a	ᆮ		о Ч			_			195	33	13		15.6		Co 18,	8, 19	တ	4		က
Erodium moschatum	Gera	AR		0.	0.47	40	а	Th		h 0			9			338	80	14		15.8	880	S,	, 4	7	4	9	0
Erophila glabrescens	Bras	z		c		6	ø	ᄕ					ذ ذ			329	40	3		14.9	266	3	, 16, 17	8	3	2	0
Erophila majuscula	Bras	z		S		ဝ	a	ᆮ		о Ч			ر. ج			123	7	0		15.5	844	က	3, 16, 17	ω	3	(1)	0
Erophila verna	Bras	z		_		10	a	ᆮ								1074	177	9	3.6	15.2	918	က	, 16, 17	ω		9	0
Erophila verna sens.lat.	Bras	z		ە. 0	0.52	10	a	ᆮ		о ч			8			2180	423	7		14.7	1011	က	, 16, 17	ω	ω.	0	0
Erucastrum gallicum	Bras	AN		Ò.		90	В	ᄔ		h 0				Ē	Eur	141	25	0		15.9	809	3	, 16	8			0
Eryngium campestre	Apia	AR <	⊋	Ó.		75	۵	ည					8			46	_	7		16.1	826	က	3,5	თ	8	8	0
Eryngium maritimum	Apia	z		ې د		09	۵	ဍ					-			291	106	7		15.2		Co 19	6	თ	4	9	က
Erysimum cheiranthoides	Bras	AR		٠		06	a	드		о Ч				_	Unk	929	8	7	3.7	15.7	804	က်	4,	7	2	_	0
Erysimum cheiri	Bras	AR			1.05	09	٥	5	돈	sw o				ტ	Gard	206	97	œ	4.0	15.6	848	က	, 16, 17	ω	Α	8	_
Euonymus europaeus	Cela	z		ص 0		009	٥	돈		չ	Root		7			1254	483	0	3.9	15.4	904	_	ε,	2	2	8	0
Eupatorium cannabinum	Aste	Z		n -0.15		150	d	hc		h R	Rhiz1		7 3			1715	410	11		15.2	974	1	1	2	9	2 9	0
Euphorbia amygdaloides	Euph	z		n -0.22		70	٥	ਨ		о ч			7			704	0	တ	4.1	16.1	827	_		4	2	9	0
Euphorbia cyparissias	Euph	Ą		o.		40	۵	얻		ᅜ	Root		7	ပ	Eur	369	7	7	3.6	15.6	838	m	, 4, 7, 19	œ	3	(1)	0
Euphorbia esula x waldsteinii																											
(E. x pseudovirgata)		¥.		-		80	۵	<u></u> ဥ ု			Root		\dashv		Eur	169	0	-		16.1	715	က		ω		2	0
Euphorbia exigua	Enbh	AR:		-		20	В	ا ا					-			1039	125	က		15.8	783	4		9			0
Euphorbia helioscopia		AR		-0.77		40	a	드		0 د	-		8			2114	642	12	ω Θ.	14.9	973	4	, 17	7	2	9	0

Taxon name	Fam	NS CS		RS Cha	Haht	Len P1	P2 LF1	LF2	W Clone 1	Clone2	E1 E2	Ö	Origin	GB	R C	Tian	Tiul	Prec	ပိ	Br Habitats	_	2	z	S
	Euph	N N	Ē	_	-	٥			0 Ч		8			2	_		4.	9 1203	ဌ	1,3			4	0
	Euph	AR	_	2.16	120	۵	ਠ		0 Ч		8 8				21	3 3.8	15.		4	3, 16, 17	9	2 2	2	0
Euphorbia paralias	Euph	z	Ē	n -0.35		٥	ਹ		0 Ч		0 1			182				3 987	37 Co	19			2	က
	Euph	Z		× -1.49		a	ᆮ		0		0						'	1 969	ပိ ရွှ	19				ო
Euphorbia peplus	Euph	AR		-0.17		В	드		0 4		8 8						.8 15.1	1 950	00	4, 17			9	0
Euphorbia platyphyllos	Euph	AR		-0.24		Ø	卢		р 0		_							3 733	33	4				0
ca	Euph	z	Ē	n -0.09		۵	ਠ		р 0		2							_	30 Co	18, 19				ო
Euphorbia serrulata	Euph	NA VU		r 1.20		Ø	드		р 0		8								12	1, 3				0
Euphrasia anglica	Scro	뮏	F		20	a	ᆮ		о Ч		7 1			375				3 1081	31	10, 16				0
	Scro	z	_	L	30	В	ഥ		0 4		1				ı		.2 13.6	3 1315	12	6, 11				0
Euphrasia cambrica	Scro	NE VO		_	∞	a	卢		о Ч		-						.8 13.2	2458	82	15				0
ae	Scro	뮏	Ë	_	9	a	卢		о Ч		4							5 1638	88	10, 11				0
	Scro	z	_	c	20	a	卢		0		1			970		3 3.2	.2 13.8	3 1267	37	7, 8, 16	œ	9	7	0
sis	Scro	z		S	9	a	卢		о Ч		4						6 12.4	1263	သ					_
Euphrasia frigida	Scro	z		s	20	В	ഥ		0 4		4			ı	ı				31	15, 16			7	0
Euphrasia heslop-harrisonii	Scro	뮏	Ë	_	15	a	卢		о Ч		4							3 1695		21			4	ო
Euphrasia marshallii	Scro	뮏	Ë	_	12	a	卢		о Ч		4							1334	% 0			9	ო	_
Euphrasia micrantha	Scro	z	F		25	a	ᆮ		о Ч		7 3						.0 13.2	1400	8	8, 10			7	0
Euphrasia nemorosa	Scro	z	Ē		32	В	卢		0 Ч		7 3								37	7, 10	7		4	0
agg.	Scro	z	_	n -1.61		а	Th		р 0		6 3							1131	31	6, 7, 8, 10				0
Euphrasia ostenfeldii	Scro	z	Ë	_	12	a	ᆮ		о Ч		1						.8 12.2	1694	4	16		5		0
Euphrasia pseudokerneri	Scro	뮏		s	20	В	ᆮ		0 Ч		7 1								23	7				0
Euphrasia rivularis	Scro	뮏	Ē	_	15	Ø	두		0 Ч		4								Ω.	15, 16				0
Euphrasia rostkoviana	Scro	-			35	Ø	드		0 4		2								36	9				0
	Scro	NE EN		ı	10	В	T				1			4		0 3.5			74 Co	18	8	4 7	2	-
gensis	Scro	z	_	0	12	a	드		р 0		2								34	16				0
	Scro	z	-		22	a	ᆮ		р 0		4						12		75	10, 15	ω			0
etra	Scro				15	В	ᆮ		о Ч		7 1						4		22	6, 10				က
	Scro	NE VU		r -	20	а	느		h 0		7 1							1	33	10				0
	Gent	z		0		а	Τh		р 0		8 2			-	0	1 6.8			12	19		8	2	_
ulentum	Poly	Ą		-0.53		В	ᆮ		о Ч			As1?							88	4				0
	Faga	z	_	n -0.62	"	۵	£				7 3							7 1061	7.	_	n	5	2	0
6	Poly	AR		-1.31		В	ᆮ		о Ч		4								7	3, 4	_			0
Fallopia dumetorum	Poly	z	"	s -0.33		а	Th		h o		2 2								34		9			0
	Poly	Ą	-	1.83		٥	ច		h Rhiz2			As2					.7 14.8		1 3	3, 14, 17	9	9 2		0
ensis	Poly	Ą	-	1.05		٥	ច		h Rhiz2			As2							92	3	9	2		0
Festuca altissima	Poac	z	_	n 0.83	_	۵	2		р 0		7 3								0	1, 16	n		2	0
	Poac	z	-	S	75	۵	2		h Rhiz2		7 1			108	4				28	19	° ∞	4		ო
	Poac	z	_	0		d	hc		h o		7 1								96	19	8			_
cea	Poac	z	_	n 1.71	_	d	hc		0 H		8 4				554		.6 14.9	086 6	30	6, 7	8	2 9	9	_
	Poac	z	_		35	۵	2		h Ogr		7 2					4 3.0			8	80	ω	3	7	0
ea	Poac	z	_	n 0.46		۵	2		р 0		_					0 3.			31	1	2	2 9	_	0
	Poac	z	_	0	25	۵	2		р 0		0 2			0	0	9	4	5 780	õ	16, 18	00	4	ო	_
Festuca lemanii	Poac	NA		r	99	d	hc		р 0		7 1			7	0	1 3.	.4 15.3	3 1079	29	7, 8, 16	8	4 7	2	0
olia	Poac	S z		_	40	٥	2		0		7 1				0	6 4.8	8 16.2	75	77	80	ω	3	7	0
Festuca ovina	Poac	z	-		43	۵	2		h Ogr		2	_		1788 5	284	4 ω	14.	110	<u>8</u>	7,8	<u></u>	4	7	0

Taxon name	Fam	NS	SS	RS C	Cha	Haht Len	7	P2 LF1 LF2		W Clone1		Clone2 E	E1 E2	O	Origin	GB	≅	ر ۲	Tian T	Tiul	Prec	S	Br Habitats	_	<u>~</u>	z	S
Festuca ovina agg.		z		9		45	۵	암		h Ogr	_	_	9			2718	726	13		14.4	1118	7	8	_	4		0
Festuca pratensis	Poac	z		<u>ہ</u>	-0.16	8	۵	2		0			5			1976	569	4		14.9	982	9		^	9	9	0
Festuca pratensis x Lolium perenne (x Festulolium																											
loliaceum)	Poac	H		u		92	d	hc	,	h 0						790	8	4	2	15.5	851	9		80			_
Festuca rubra	Poac	z		_	-	72	۵	ဥ	•	h Rhiz2		• •	9			2799	974	12	2	14.5	1104	'n	5, 6, 21	ω	2	2	7
Festuca rubra agg.	Poac	z		n 2	2.96	72	۵	ဥ		h Rhiz2		.,	-			2799	974	12		14.5	1104	9		ω			7
Festuca vivipara	Poac			0	.13	44	۵	ည		h Ogr	DRi	•	9			801	182	0	_	12.7	1592	15	15, 16	ω	9		0
Filago gallica	Aste	AR CR	œ	0	0.01	20	Ø	드		о ч				Eur	_	21	0	7		16.4	647	3, 4	4	တ			0
Filago lutescens	Aste	NA VU	_	ο O	-0.34	52	Ø	드		0			3			82	0	0		16.4	099	'n	4	တ	ω 4		0
Filago minima	Aste	z		ٻ د	-0.91	20	В	۲		0 4			2			788	105	12		15.1	904	16		ω	3		0
Filago pyramidata	Aste	AR EN	z	7	-1.14	8	a	드		0						132	0	7		16.3	687	4		တ	7	n	0
Filago vulgaris	Aste	z		<u>د</u>	-1.20	32	a	드		о ч						980	78	ω		15.5	832	ო		^	9		0
Filipendula ulmaria	Rosa	z		٩ د	-0.10	120	۵	ဥ		h Rhiz2	_		5			2692	296	က		14.5	1105	7		_	8		0
Filipendula vulgaris	Rosa	z		ې د	-0.07	20	۵	2	<u>ნ</u>	h Rhiz1	DRg		4			578	∞	က	3.6	15.8	277	7		^	8	7	0
Foeniculum vulgare	Apia	AR		-	1.17	250	۵	hc		0 H		ľ	0	Eur		961	9	13	1.1	15.9	823	ć,	3, 16, 17	6	2	2	က
Fragaria vesca	Rosa	z		ر ا	-1.09	တ္ထ	۵	2		h Stol2		<u> </u>	4			2380	819	9		14.6	1091	-	7	ဖ			0
Fragaria x ananassa	Rosa	A N		0		40	۵	일		h Stol2				Gard	<u>r</u>	740	20	2	3.7	15.5	863	'n	17	9	5		0
Frangula alnus	Rham	z		우 드	-0.16	200	۵	占		0 %			4			712		0		15.8	881	_		9			0
Frankenia laevis	Fran	z		s 0		œ	۵	당		о ч			8			28	0	2		16.5	680	Co 19,	9, 21	თ			2
Fraxinus excelsior	Olea	z		o u		2500	d	Ph		0 M			2 3			2459	930	10		14.7	1069	1		2			0
Fritillaria meleagris	ij	Ϋ́		s 0		30	۵	д		0 H			2			98	0	0		16.3	688	9		ω			0
Fuchsia magellanica	Onag	AN		_		150	۵	P	-	0 M				SAm	Е	367	542	7		14.3	1223	₍	17	9	9		0
Fumaria bastardii	Fuma	z		0		72	Ø	ഥ		о Ч			1			423	330	10	4.5	14.8	1086	4		ω	9	9	0
Fumaria capreolata		z		n 0		100	а	Th		р 0			9 2			482	180	11		14.9	997		16	7	4 6		0
Fumaria densiflora		AR	П	P		25	В	Тh		0 4			3			307	16	0		15.5	292	4		80	3 8		0
Fumaria muralis	Fuma	z		г -		100	а	느	•	о Ч			7			1200	368	13			1004	4		7			0
Fumaria occidentalis	Fuma	Щ Ш		s O		100	а	ᄕ		о Ч			-			31	0	0			1073	'n	4	_	4	2	0
Fumaria officinalis		AR		우	-0.34	25	a	드	•	о ч			ღ დ			1978	304	12		15.0	912		4	9	2		0
Fumaria parviflora		AR		P	-0.55	47	а	Ļ		о Ч			က			128		0		16.1	703	4		8	8		0
Fumaria purpurea	Fuma	z		s O		09	Ø	드	•			- 1	7			191	`	7		14.8	978			7	9		0
Fumaria reuteri	Fuma	Z Z		우	-0.62	9	a	드					-	Б Ш		13				16.1	928	'n	4, 17	ω		Ω.	0
Fumaria vaillantii	Fuma	m		우	.51	42	a	卢		о ч			-			116	0		3.5	16.2	702	4		ω	ထ		0
Gagea bohemica	≣	≥ ×	_	<u>-</u>	-	თ	۵	පි		otp P	DRa		დ დ	ပ		_	0	0		14.7	1008	16	,	တ			0
Gagea lutea	ΠÏ	z		n O	0.16	22	р	В		h Otb	DRg		_	ပ		212	0			15.1	861	1,	3, 14, 16	4	9	7	0
Galanthus nivalis	≣	N N		က	3.01	22	۵	පි	·	h Otb	DR		დ დ	Eur		1763	ဗ္တ	2	3.5	15.2	919	۲,	3, 17	Ŋ	2	_	0
Galega officinalis	Faba	AN				150	۵	h		о Ч			7 3	c Eur	_	352	0	_		16.2	725	'ń	17	œ	2	ω	0
Galeopsis angustifolia	Lami	AR		ကု	-3.31	20	a	H H		0 H			7 3			616	43	0		15.8	791	4	16	ω	2 8		0
Galeopsis bifida	Lami	z		_		100	a	드		о Ч			2			1135	138	_		14.9	1011	4		_		9	0
Galeopsis segetum	Lami	AR EX	×			20	Ø	ᄕ		о Ч			7			32	0	0	_	15.6	789	4		_	ω		0
Galeopsis speciosa	Lami	AR		-1	.82	100	а	Тh		0 H		1	5 4			666	84	0		14.5	1043	4		2	2 2	7	0
Galeopsis tetrahit	Lami	z		_		100	a	드		о ч			5			1725	409	_		14.8	1025	ო		_	5	9	0
Galeopsis tetrahit agg.	Lami	z		ې د	-0.61	100	a	드		о ч		<u> </u>	വ			2508	623	4		14.5	1073	ო		_	5	9	0
Galinsoga parviflora	Aste	A N		0	0.63	80	a	ഥ		о Ч				SAm	ш	429	7	စ	3.8	16.1	721	4	17	7	9	7	0
Galinsoga quadriradiata	Aste	AN		1		80	a	Тh		0				SAm	2	524	2	9	ω _.	16.0	778	რ	4, 17	7	2	9	0
Galium aparine	Rubi	z		٩	60.0-	150	В	۲ ۲		0 4			2 3			2672	096	14	3.6	14.6	1080	ά,	4, 17	9	9	8	0

Taxon name	Fam	SN	SS	RS	Cha	Haht L	Len P1	P2 LF1	:1 LF2	≥	Clone1 C	Clone2	E1 E2 C	Origin	GB	프	O	Tian	ij	Prec	ပိ	Br Habitats	<u>П</u>	2	z	S
Galium boreale	Rubi	z		_	_		٥	2		ح			9				0	2.2	12.8	1580		7, 16	7	5 7	ω	0
Galium constrictum	Rubi	z		-		4	۵	2		h Rhiz1	<u>1</u> 21		1		_	0	Ω	5.0	16.5	799		13	∞	၈	7	0
Galium mollugo	Rubi	z		_	0.04	112	۵	2		h Rhiz2	,z2		2		1665		<u>`</u>	3.5	15.3	905	Ė	7	_	7	4	0
Galium odoratum	Rubi	z		- L	-0.62	45	р	မင		h Rhiz2	z2		7 3		1836			3.4	14.7	1086		1	3		. 6	0
Galium palustre	Rubi	z		ч	0.07	22	d	hc		h Rhiz1	iz1				2652	2 932		3.5	14.5	1105		11	2	6		0
Galium parisiense	Rubi	¥		S	-0.57	93	a	느		о ч			9		63	3	0	3.7	16.3	693		3	œ	3 7		0
Galium pumilum	Rubi	z		_	-1.32	32	۵	2		h Node1	de1				65			3.7	16.2	754			7			0
Galium saxatile	Rubi	z		_	-0.15	30	۵	2		h Noc	Node2		7 2		2489	ĸ		3.5	14.3	1148		8,9	9	9		0
Galium spurium	Rubi	¥		Ė	-1.87	100	a	녿		о ч			7 6 c	NHem	22	2		3.9	16.1	755		4	_			0
Galium sterneri	Rubi	z		۲	69.0	30	۵	2		h Node1	de1		4 2		273	, ,	0	2.0	13.0	1457		7, 16	တ	7	1	0
Galium tricornutum	Rubi	Ä	유	Ė	-4.78	20	a	卢		о ч			4		386	9		3.8	16.1	736		4	_	7	4	0
Galium uliginosum	Rubi	z		۔ د	-0.14	09	۵	2		h Rhiz1	<u>i</u> z1		2		1435			3.2	14.9	961		11	_	စ		0
Galium verum	Rubi	z		د	-0.85	75	۵	2		h Rhiz2	,z2		2		2516			3.5	14.6	1045		7	_			0
Gastridium ventricosum	Poac	₹		υ	-0.48	20	a	卢		о ч			0		159	0		4.6	16.3	839		4,7	တ		7	0
Gaudinia fragilis	Poac	Ϋ́		s		45	a	ፗ		о Ч			9 2		4			4.5	16.2	865		3,6	∞	2 6		0
Gaultheria shallon	Eric	¥				120	۵	풉		w Rhiz2	,z2			Am4	179			3.6	14.9	1077		1, 10	က	4		0
Genista anglica	Faba	z		ا د	-1.09	20	۵	ਠ	Ł	o ≯			7 1		82			3.0	14.6	1019		10	œ	5		0
Genista pilosa	Faba	z		<u>-</u>	-0.26	4	۵	ర్	돈	o >			7 3		23			5.0	15.6	1011		10	ω	4	_	0
Genista tinctoria	Faba	z		ا د	-0.77	09	۵	ర్	돈	o ≽			7 3		83			3.6	15.6	880		9	ω	2	7	0
Gentiana nivalis	Gent	z	NΩ	-		15	a	┖		о Ч			1 3					-0.5	11.2	1853		15, 16		2 2	3	0
Gentiana pneumonanthe	Gent	z		υ υ	0.31	4	٥	2		о ч			7		130			3.7	15.7	806		8, 10		7	_	0
Gentiana verna	Gent	z		-	0.21	7	٥	ਠ		о ч			ر					4.0	14.4	1153		7, 16	ω	8	_	0
Gentianella amarella	Gent	z		_	-0.75	99	۵	2		о ч			9		88		0	3.5	14.9	932		7	œ	8		0
Gentianella anglica	Gent	岁		S	-0.32	20	٩	2		о ч			7 1		=			4.1	16.1	812		2				0
Gentianella campestris	Gent	z		L	-1.28	30	q	2		о Ч			5 3		91			3.1	13.5	1298						1
Gentianella ciliata	Gent	⋖	CR	_		30	Q	2		о ч			7 4 c		2	2 0	0	3.3	16.1	782		7	œ	3	2	0
Gentianella germanica	Gent	z		S	-0.17	37	Q	<u>ک</u>		о ч			7 3 c		က			3.3	16.2	725						0
Gentianella uliginosa	Gent	z	۸n	_		15	Q	2		о ч			7 3					5.2	12.1	1221	රි	19		8 7		0
Geranium columbinum	Gera	z			-0.34	09	Ø	卢		о ч			7 3		887			4.0	15.6	921	Ì	3,7	7	7	7	0
Geranium dissectum	Gera	AR			60.0-	09	а	Th					8 3		2245		14	3.7	14.8	1011	Ţ	3, 4	2	2 2	9	0
Geranium endressii	Gera	Ą			2.07	2	۵	2			i z2			Enr	51			3.5	15.0	991	,,	3, 17	9	2	9	0
Geranium lucidum	Gera	z		_	1.42	40	a	ഥ		о Ч			9		1460	0 323	4	3.6	12.1	991		3, 16	9	7	Ш	0
Geranium molle	Gera	z		د	-0.46	9	Ø	ᆮ							2385			3.7	14.8	1026		3,4	7		5	0
Geranium phaeum	Gera	A			-0.67	80	d	hc		h 0		Rhiz1		Eur	578			3.5	15.2	931		1, 3, 17	9	5 6		0
Geranium pratense	Gera	z		_	0.15	100	۵	2					2		1383	3 2		3.0	14.9	922			7	2	7	0
Geranium purpureum	Gera	z		S	0.22	20	Ø	드		о Ч			1		52		11	2.2	16.1	962		3, 16	7	3	n	_
Geranium pusillum	Gera	z		_	0.16	40	a	드		о Ч			7 4		1237			3.7	15.6	784		3	7	7		0
Geranium pyrenaicum	Gera	¥			1.14	09	۵	2		о ч			7 3	Enr	1266			3.8	15.6	823		3, 17	œ	7	9	0
Geranium robertianum	Gera	z		_	-0.41	20	Q	a hc	ᄕ	о ч			7 3		2552	٥,		3.5	14.6	1092		1, 16	Ŋ	9		0
Geranium rotundifolium	Gera	z		ч	1.70	40	а	Th		0 4			_		446	6 25		4.2	16.2	810		3, 16, 17	2	4 7	9	0
Geranium sanguineum	Gera	z		_	0.83	40	۵	<u>ک</u>		h Rhiz2	iz2		7 3		303			3.7	14.6	966		7, 16	7	7		0
Geranium sylvaticum	Gera	z		ב	-0.45	2	۵	2					4		675		0		13.0	1339		6, 16	9	2	D.	0
Geum rivale	Rosa	z			-0.70	20	۵	2		о ч			4		1739	9 302		2.9	14.0	1196		1, 16	9	9	4	0
Geum urbanum	Rosa	z		ב	-0.53	20	d	2					7 4		2330	8	9	3.6	14.7	1044		1	4	9	7	0
Gladiolus communis	<u>lri</u>	¥.				9	٥	<u>ဇ</u> ်		h Rhiz		DRg	0	Eur	152	0	12	2.5	16.0	944		3, 4	7	4	4	0
Gladiolus illyricus	힏	z		-	-0.10	20	۵	ত	_	h Rhiz'	121		0 1			6	0	4.5	16.5	794		- 1	Ŋ	7	m	0

Tayon name	Fa	Z	ď	ď	, Pa	Hob+	0	D1 D2	- F1	- E3	//	Clone1	Cond	7 F1	F2 (c	Origin	G.	Ω	<u>-</u>	Lish	- E	Dran	S	Br Hahitate	_	ц	0	ď	_
Glaucium flavum	Papa			\vdash	_	06	\vdash	. —		1		2	5	_	_	_	200	296	8	[∞]	7	15.5	933	8 8	19	ر ا	10	- m	, _©	~
Glaux maritima	Drig	z			-0 41	8		L C	ځ	٢		Phi-2		י	. (-		935	267	, =	4.2	143	1177	3	21	α)) 	L.	ı d
Glechoma hederacea	2	z		: c	- 6	8 8		2 2	5 2	2		Node2) ני	ט ע	+		2242	200		i (5 6	100		- 1 - %) (C	٠ (.		ric
Glyceria declinata	0000	z		= c	2 2	3 8		ם ב	2 2			Nodes)	ى د	-		1860	3 5	- α	ט ה	ξ ζ	105		1, 0)	0	٠ (. (4	olo
Chooria fluitans	2 0	2 2			2 0	8 8	\dagger	2 6	<u> </u>			70001		- 1	1 0	+		- 0	7 0	7) (d	, t	200		7 - 7	٠ ٢) () נו) C
Glyceria fluitans x notata (G	L Od C	z		=	0.0	S S		2	È	I		Zanor		\perp	0	-		7007	0/0	=	0.0	1. U	020		- - 4	_	2	D		<u> </u>
x pedicellata)	Poac	Ξ		_		95		۵	£		z	Node2						719	69	4		15.5	872		11, 14		9	_	ω	
Glyceria maxima	Poac	z		_	0.65	200		۵	£	2	모	Rhiz2		7	ဖ			1291	162	0	3.6	15.5	823		11	7	9	_	00	0
Glyceria notata	Poac	z		_	0.31	92		۵	£		z	Node2		7	က			1455	357	2	3.6	15.2	902		11, 14	7	9	9	_	0
Gnaphalium Iuteoalbum	Aste	¥	S	_	0.23	45		a	卢		h 0			ω	4			7	0	7	5.0	16.4	716		4, 19	6	7	2	က	
Gnaphalium norvegicum	Aste	z		ဟ	0.58	9		۵	ဥ		٥			_	ო			18	0	0	-0.5	10.6	2123		15, 16	ω	Ŋ	4		0
Gnaphalium supinum	Aste	z		_	-0.68	12		۵			٥			-	ო			180	0	0	0.7	11.5	2077		15	ω	_	က		<u></u>
Gnaphalium sylvaticum	Aste	z		_	-2.65	42		۵	ဥ		o د			Ŋ	4			1014	159	0	3.0	14.2	1112		3, 10	^	ဖ	4	က	0
Gnaphalium uliginosum	Aste	z		_	0.80	24		а	ᄔ		h 0			2	2			2383	669	12	3.6	14.6	1074		11, 13	7	9	9		_
Goodyera repens	Orch	z		_	-0.34			d	рc			Rhiz2		4	9			186	0	0	2.2	13.2	1030		2	2	2	3	2	0
Groenlandia densa	Pota	z		_	-1.23		92	۵	£		ᆮ	Irreg	Rhiz2	^	ო			290	42	0	3.7	15.9	750		13, 14	ω	12	ω	ω.	_
Gymnadenia conopsea	Orch	z		_	-0.76	4		۵	ნ		o ح			2	2			1341	365	0	3.2	14.2	1187		7, 11	7	9	_	e	0
Gymnocarpium dryopteris	Wood	z		_	-0.21	32		۵	ნ		ᅩ	Rhiz2		2	ဖ			963	10	0	2.2	13.1	1445		1, 16	4	2	4	4	0
Gymnocarpium robertianum	Wood	z		S	-0.37	45		۵	ნ		ᅩ	Rhiz2		2	9			113	_	0	2.7	14.6	1168		16	7	က	œ	4	_
Hammarbya paludosa	Orch	Z		u	-0.32	8		d	hc		0 4		DRI	4	9			302	44	0	2.9	13.3	1615		11	6	6	2	1	0
Hedera helix	Aral	z		_	-0.65	3000		۵	돈	ნ	∠ ≥	w Node2		ω	ო	_		2549	964	4	3.6	14.6	1086		1,3	4	Ŋ	_	9	_
Helianthemum apenninum	Cist	z		_	0.12	15		۵						თ	ო	_		4	0	0	5.3	16.5	873		7	∞	-	œ		_
Helianthemum nummularium	Cist	z		_	-0.70			۵						7	ო			1002	_	0	3.0	14.8	924		7	_	4	_	0	<u></u>
Helianthemum oelandicum	Cist	z		S	0.03	12		d	င်		_			ဝ	က			20	10	0	4.3	14.8	1108		7, 16	∞	က	8	_	ا ي
Helianthus annuus	Aste	Ą				200		а	ᆮ		o د					Am	_	396	14	4	3.9	15.9	784		3, 17	7	ဖ	2		0
Helianthus tuberosus	Aste	Ą				170		۵	ნ		h Rhiz1	thiz1				Ā	_	156	_	7	3.8	16.1	719		17	7	7	ω	œ	0
Helictotrichon pratense	Poac	z		_	0.31	8		۵	ဍ		٥			7	က			1001	0	-	2.9	14.6	986			7	4	_	2	0
Helictotrichon pubescens	Poac	z		_	0.35			۵	ဥ		٥			7	က			1686	406	7	3.5	14.6	1038		6, 7	7	4	_	<u>ო</u>	0
Helleborus foetidus	Ranu	z		s	0.86			d	ပ်		٥ د			ω	7			125	0	0	3.7	16.0	806		1,3	2	4	8		<u></u>
	Rann	₹		_	-0.28			<u>م</u>	ဍ		o د			^	7			303	0	0	3.5	15.8	805		1,3	က	2	ω	9	<u></u>
unu	Apia	¥			2.09	320		۵	ဍ					1		급	_	1079	163	7	3.6	15.2	876		3, 14, 17	_	9	9		<u></u>
Heracleum sphondylium	Apia	z		_	0.08	175		٩	ဍ					2	Ŋ			2692	929	4	3.6	14.5	1088		3, 6	7	2	_		0
Herminium monorchis	Orch	z		S	-0.93	15		۵	ნ			Rhiz2		7	-	ပ		104	0	0	3.6	16.2	770		7	ω	2	ω	0	<u> </u>
Herniaria ciliolata	Cary	z		-		7		_	၃်	j				ω	0			2	0	7	6.5	16.2	887	රි	18	၈	4	2	_	CI I
Herniaria glabra	Cary	z		-	0.83	Ω		a a	ဍ	드				/	4	+		16	0	0	3.2	16.1	624		ω	ω	2	9	2	0
Hesperis matronalis	Bras	¥			1.53	9		۵	ဥ							Ш	_	1709	515	4	3.6	14.8	696		3, 17	_	_	_		<u> </u>
Hierochloe odorata	Poac	z		_	0.39			۵	ဍ			Rhiz2		4	-	O		18	_	0	3.4	13.5	1092		11, 13	9	တ	_	0	0
Himantoglossum hircinum	Orch	z	₹	S	-2.40			۵	ნ		o د			თ	7	_		113	0	7	3.8	16.3	728		3, 7, 16	7	က	၈		0
Hippocrepis comosa	Faba	Z		_	-0.54	25		р	ပ		h 0			7	3			348	0	2	3.7	16.0	814		7	8	3	8	2	
Hippophae rhamnoides	Elae	Z		S	1.27	300		d	P	P	× ×	Root		2	3			9	0	0	3.9	16.0	624	တ	19	8	2	2	2	~
Hippuris vulgaris	Hipp	z		_	-0.05	30	100	۵	£		모	Rhiz2	Node2	2	ဖ			1142	407	2	3.5	14.7	962		11, 13	7	10	9	4	_
Hirschfeldia incana	Bras	Ą				130		a	卢		ᅩ					Eur	_	373	21	ဝ	4.1	16.0	870		3, 17	∞	က	_	ω.	
Holcus lanatus	Poac	z		_	1.34	100		۵	ဍ		ᅩ			ω	က			2797	977	4	3.5	14.4	1106		3, 6	7	9	9	ω.	
Holcus mollis	Poac	z		_	0.80	100		d	ဍ		ᅩ	Rhiz2		7	က			2537	575	11	3.4	14.5	1101		1, 3, 9	9	9	3		0
Homogyne alpina	Aste	₹	Z W	-		၉		۵	ဍ		ᆮ	Rhiz2		7	က				0	0	- 0.	10.7	1417		15, 16	9	9	4	2	<u></u>
Honckenya peploides	Cary	z		_	-0.58	25	\dashv	۵	2		٥			ო	ဖ	\dashv		726	211	12	4 .α	14 4.	1130	გ	19	တ	2	/	ယ	<u>m</u>

Taxon name	Fam	NS	SS	RS C	Chg H	Hght Len	en P1	P2 LF	1 LF2	≥	Clone 1	Clone2	딘	E2 C	Origin	GB	<u>~</u>	<u></u>	Jan	這	Prec (Co Br Habitats	, L	ш	2	z	S
S	Poac	z		s		120	۵	2		о ч	-		7	က		185	_	0	3.2	15.5	788	1	9	4	7	_	0
	Poac	AC				75	a	ᆮ		٥ د					Crop	714	9/	ო	3.8	15.4	868	3, 4	ω	4	_	_	0
ז sens.lat.	Poac	AC				87	a	ᆮ		о Ч					Crop	714	9/	က		15.4	898		Φ	4	_	_	0
Hordeum jubatum	Poac	AN				09	d	hc							As2, Am	349	9	-	`	15.4	800	3,5	6	9	7	9	0
	Poac	z		o s	-0.85	37	a	드					ნ	_		146	0	_		16.4	720	9	6	9	ω	9	4
Hordeum murinum	Poac	AR		ٻ	-0.04	09	a	ᆮ		о ч			° Ф	4		1497	48	4	3.8	15.6	817	3, 17	∞	4	_	9	0
ım	Poac	z		<u>ہ</u> ۔	-0.19	20	۵	2					_	က		926	၉	0		16.0	742	2	∞	9	/	9	_
Hordeum vulgare	Poac	AC				100	а	T		h 0					Crop	196	8	_		15.6	833	3, 4	6	4	7	7	0
Hornungia petraea	Bras	z		0 8	0.31	10	а	T		0 4			:	3		26	0	က		14.8	1161	16	6	2	ω	_	0
Hottonia palustris	Prim	z		ې _	-0.63	É	120 p	主		노	Irreg		, _	က		463	7	0		16.0	269	13	7	=	_	Ŋ	0
Humulus lupulus	Cann	z		ې _	60.0-	450	۵	2		도	Rhiz2		,	4		1273	0	ω		15.8	833	က	9	_	_	ω	0
Huperzia selago	Lyco	z		<u>ہ</u>	-0.41	10	۵			sw o			2	9		686	234	0	2.7	13.2	1472	15, 16	7	9	7	7	0
Hyacinthoides hispanica	≣	Ą				09	٥	පි		h Ofb	Q				Eur	847	9/	12		15.5	998	1, 3, 17	2	4	ဖ	ဖ	0
Hyacinthoides non-scripta	≡	z		ې د	-0.41	20	۵	පි		h Otb	Q			_		2439	290	13		14.6	1092	1,9	2	2	2	9	0
Hydrilla verticillata	Hydr	z		_		_	100 p	主		<u>-</u>	DRa	DRg	ω	ပ		2	_	0		14.2	1555	13	9	12	တ	က	0
Hydrocharis morsus-ranae	Hydr	z		<u>ہ</u>	-0.89		50 p	Î		ب ک	Sto11			4		323	8	7		15.8	772	13	7	7	7	_	0
Hydrocotyle ranunculoides	Apia	Ą				20	40 p	Î		모	Irreg				Am	43	0	0		16.6	680	13, 14	7	9	7	_	0
Hydrocotyle vulgaris	Apia	z		<u>ہ</u>	-0.53	20	۵	2		ž	Node2		ω	7		2091	842	9		14.4	1126	11	ω	ω	9	က	_
Hymenophyllum tunbrigense	Hyme	z		ې د	-0.54	80	۵	24		모	Rhiz1)	0		197	112	0		14.0	1567	16	4	9	7	က	0
Hymenophyllum wilsonii	Hyme	z		<u>ہ</u>	-0.87	10	٥	2		도	Rhiz1		2	0		222	176	0	3.1	13.1	1685	1, 16	2	2	က	က	0
Hyoscyamus niger	Sola	AR		7	-1.38	8	٥	2		٥ د				4		796	87	2		15.7	799	4	ω	4	_	တ	0
Hypericum androsaemum	Clus	z		٥	0.78	8	٥	Ł		o ≥			-	2		1139	744	ω	4.0	14.8	1184	1,3	2	ဖ	ဖ	Ŋ	0
Hypericum calycinum	Clus	Ą		٦	0.74	09	٥		돈	≥	Rhiz2				Eur	702	ဗ	7		15.6	884	3	2	7	Ŋ	Ŋ	0
Hypericum canadense	Clus	AN				20	a	上		о Ч					Am	0	က	0	4.6	14.4	1252	11, 14	ω	ဝ	2	7	0
Hypericum elodes	Clus	z		<u>ہ</u>	-0.46	20	40 p		主	ž	Node2		7	_		583	260	7		14.8	1194	11	ω	9	က	7	0
Hypericum hirsutum	Clus	z		ې _	-0.18	100	۵	온		о ч			, _/	4		1276	10	0		15.3	832	6,7	9	Ŋ	_	Ŋ	0
Hypericum humifusum	Clus	z		<u>ہ</u> د	-0.40	10	Q			о Ч			. 7	က		1732	428	12		14.8	1085	က	7	9	4	က	0
,	Clus	z		r	0.09	40	р	hc	ch	h 0			8	1		14	0	6		15.8	1069	16	7	3	က	2	0
Hypericum maculatum	Clus	z		n 2	2.11	09	d	hc		h R	Rhiz2		2	3		1180	300	0	3.6	15.0	1016	1, 3, 16	9	9	2	2	0
	Clus	z		۰ د	-0.49	80	۵	2					-	ဗ		269	0	0		15.6	867	1,3	7	4	ω	7	0
n	Clus	z		_		8	۵	2			Rhiz2 R	Root	-	4		1906	382	9		15.1	921	7	7	4	7	D	0
	Clus	z		ې د	-0.32	09	۵	2						7		2427	887	თ	3.5	14.3	1148	10, 16	9	Ŋ	4	က	0
Hypericum tetrapterum	Clus	z		۰ ا	-0.41	9	ď	h		h St	Sto11		_	က		2101	842	7		14.9	1025	11	7	ω	9	4	0
ш	Clus	z		ο o	-0.12	09	۵	2		h St	Sto11		ω	_		8	0	0		15.5	1152	1	ω	ω	4	7	0
	Aste	z			-1.01	20	Ø	ᆮ		о ч				က		270	Ŋ	4		15.9	754	80	ω	4	4	7	0
a	Aste	z	7	우 -	-0.10	09	۵	2		٥ د				ე ე		17	0	-		16.1	710	7	ω	4	ω	က	0
radicata	Aste	z		_	0.61	09	۵	2					ω	က		2725	977	4	3.5	14.5	1104	9	∞	4	Ŋ	က	0
Iberis amara	Bras	z		s -1		32	а	上		h 0				2		47	0	0		16.3	710	7	7	4	ω	3	0
	Adni	z		ې د		1200	۵	돈					∞	7		2353	861	4		14.7	1079	_	Ŋ	Ŋ	Ŋ	Ŋ	0
un,	Cary	z		۲	-0.60	20	Ø	ᆮ		٥ ح	_	Node1		2		37	0	0	ဖ	15.7	1062	3, 13	ω	7	က	7	0
Impatiens capensis	Bals	Ą		J	0.71	09	a	ᆮ		о ч				-	Am6	323	_	0	3.7	16.2	723	13, 14	7	თ	/	9	0
Impatiens glandulifera	Bals	A		_	1.85	200	a	卢		о Ч					As1	1599	286	9	_	15.1	957	14	9	ω	7	_	0
Impatiens noli-tangere	Bals	z		o- د	-0.77	9	а	느		h 0			7	2		21	0	0	9	13.9	1833	1	4	7	7	9	0
viflora	Bals	Ą		J	0.10	10	Ø	ᆮ		٥ د					As1	470	_	0	3.5	15.7	821	_	4	Ŋ	_	ω	0
	Aste	z			-0.15	125	۵	2		٥ د			-	က		860	0	7	3.9	15.9		7, 16	7	က	ω	ო	0
Inula crithmoides	Aste	z		s	60.0	92	٥	2		٥ د	\dashv		<u>ა</u>			121	19	œ	5.1	16.1	698	Co 18	တ	9	7	2	Ω

Taxon name	Fam	NS	CS	RS	Cha	Haht	len P1	7 P2	F1	F2	×	Clone1	Clone2	F1	F2 C	Origin	GB	2	- C	Fian	Lin	Prec	CoBr	Br Habitats	ш	œ	z	S
Inula helenium	Aste	AR		_				۵			0				_	Ш	631	100	က	4.0	12.1	973	ന		9	9	Ŋ	0
Inula salicina	Aste	z		0		09	_	۵	ဥ		도	Rhiz2		^	ည		0	က	0	4.7	14.9	1017	16		8	თ	က	0
Iris foetidissima	Irid	z		ч	1.47	80	_	d	hc		hR	Rhiz1		8	2		728	0	14	4.2	16.1	821	1		5 4	8	2	0
Iris germanica	Irid	Ą				92		Ω.	ည		모	Rhiz1			Н	Gard	211	_	က	3.9	16.0	734	3, 17		8	9	4	0
Iris pseudacorus	lrid	z		_	0.16	120	_	۵	ြ	£		Rhiz2		ω	ო		2563	929	9	3.7	14.6	1081	17		7	9	ဖ	_
Isatis tinctoria	Bras	AR			1.08	120		a a	ဥ							Eur, As	102	7	-		16.0	733	3, 16			ω	က	0
Isoetes echinospora	lsoe	z		ב	0.65		15 p	р	Η		о Ч			4	9		178	32	0	3.2	13.0	1613	13		7 12	2	7	0
Isoetes histrix	lsoe	z		۰		4		۵	ဥ		o د			တ	_		က	0	2	9.9	16.2	829	16		8	Ŋ	_	0
Isoetes lacustris	lsoe	z		_	0.95		25 p	ď	£		0 د			4	4		522	147	0	2.8	12.9	1660	13		7 12	4	_	0
Isolepis cernua	Cype	z		c	0.23	15	ν,	а	ᆮ	ဥ	o ح			တ	_		242	215	9	8.	14.8	1181	11		80	Ŋ	က	0
Isolepis setacea	Cype	z		_	0.53	12		а	드	ဍ	٥ د			7	4		2038	638	5	3.5	14.4	1149	11, 14	4	7	2	က	0
Jasione montana	Camp	z		_	-1.08	20		۵	ဥ		o ح			^	က		1076	420	4		14.8	1152	8, 10		4	4	7	0
Juglans regia	Jugl	AN				2400	_	۵	씸		o >					Eur?, As1?	803	11	က	3.7	15.9	779	1,3			ω	7	0
Juncus acutiflorus	Junc	z		_	1.16	100	_	۵	ဥ		도	Rhiz2		^	က		2498	845	=	3.5	14.5	1115	7		ω	4	7	0
Juncus acutus	Junc	z		S	0.01	120	_	۵	ဥ		ŏ _	0gr		თ	_		4	28	12	5.4	15.7	1031	Co 19			7	က	က
Juncus alpinoarticulatus	Junc	z		v	-0.12	တ္တ	_	۵	ဥ		모	Rhiz1		4	ဖ		23	0	0	0.7	12.1	1477	7			^	7	0
Juncus ambiguus	Junc	z		_		17		a	ᆮ		o ح			ω	က		175	22	-	4.4	14.9	666	Co 19, 27			^	Ŋ	4
Juncus articulatus	Junc	z		ے	1.26	09	_	a	ဍ		모	Rhiz2		ω	4		2740	926	1	3.5	14.4	1108	11			9	က	_
Juncus balticus	Junc	z		s	-0.34	45	_	۵	ြာ		모	Rhiz2		7	9		92	0	0	3.3	13.1	1012	Co 19		80	2	7	_
Juncus biglumis	Junc	z		s	-0.17	12	_	۵	ဥ		h Ogr	gr		-	9		37	0	0	0.5	11.4	2194	11, 15			ω	7	0
Juncus bufonius	Junc	z		_		52		a	드		ە 2			ဖ	ဖ		1986	724	က	3.6	14.6	1102	3, 11,	13, 14	7 7	9	Ŋ	_
Juncus bufonius sens.lat.	Junc	z		_	1.13	52		а	드		ە د			ဖ	ဖ		2736	937	4	3.5	14.5	1105	3, 1,	13, 14	7 7	9	Ŋ	_
Juncus bulbosus	Junc	z		_	0.34	30	90	d	ည	£	z L	Node2	Irreg	2	က		2250	827	ω	3.5	14.2	1180	14		7 10	4	7	0
Juncus capitatus	Junc	z		-		Ŋ		a	ᆮ		o ح			ω	က		12	0	9	6.3	16.1	889	10		9	Ŋ	-	0
Juncus castaneus	Junc	z		v	-0.40	9	_	۵	ဥ		도	Rhiz2		-	ဖ		4	0	0	0.7	11.2	2291	15		ω	^	က	0
Juncus compressus	Junc	z		_	-1.09	30		a	ြာ		모	Rhiz1		7	4		430	4	_	3.6	15.9	746	6, 11			7	Ŋ	_
Juncus conglomeratus	Junc	z		ч	0.84	100	_	р	hc		ŏ u	Ogr		7	3		2622	798	4	3.5	14.4	1117	11		7 7	4	3	0
Juncus effusus	Junc	z		_	1.06	120	_	d	μc		ŏ u	0gr		ω	3		2753	974	13	3.5	14.4	1108	8, 11		2 2	4	4	0
Juncus filiformis	Junc	z		S	0.79	30		۵	ဥ		ŏ _	0gr		4	9		32	0	0	2.3	13.6	1530	13			9	4	0
Juncus foliosus	Junc	z				22	.,	а	ᆮ					ω	7		218	88	7	4.3	14.7	1241	11, 13	3	ω	ဖ	ဖ	0
Juncus gerardii	Junc	z			-0.13	9	_	۵	ဥ		모	Rhiz2		ဖ	9		919	271	7	4.2	14.4	1174	Co 51		8	/	ဖ	က
Juncus inflexus	Junc	z		ב	0.04	06	_	d	ည		ŏ L	0gr		ω	4		1758	631	6	3.8	15.2	925	6, 11			7	2	_
Juncus maritimus	Junc	z			-0.26	9	_	۵	ြာ		ŏ _	0gr		ω	ო		390	196	7	4.7	15.1	1081	% 51		80	ω	Ŋ	2
Juncus pygmaeus	Junc	z	Z W	_		∞		a	ᆮ					တ	_		4	0	0	6.7	15.9	965	က		6	4	7	0
Juncus squarrosus	Junc	z		_		၉	_	a	ဥ			0gr		\	7		1849	484	0	3.1	13.8	1254	8, 12			7	7	0
Juncus subnodulosus	Junc	z		_	0.15	120	_	۵	ဥ			Rhiz1		ω	က		089	224	7	ი მ	15.5	838	7		စ	ω	4	0
Juncus tenuis	Junc	AN			0.83	40	_	р	ည		ŏ u	0gr				Am, SAm	1053	145	က	3.6	14.6	1267	1, 3,	13	7 7	2	4	0
Juncus trifidus	Junc	z		_	-0.38	8	_	۵	ဥ		ŏ _	0gr		_	4		177	0	0	0.	11.5	2162	15		8	7	7	0
Juncus triglumis	Junc	z			-0.38	20		ď	ဥ		ŏ _	0gr		_	9		200	0	0	0.0	11.8	2085	11, 16		<u>გ</u>	9	7	0
Juniperus communis	Cupr	z		_	-0.42	200	_	ď	둔	င်	o ≯			2	9		1020	145	0	2.8	13.4	1380	7, 10,	15, 16	8	2	က	0
Kickxia elatine	Scro	AR			-0.18	22	,,	a	ᆮ		0 د			ω	က		911	41	7	4.1	16.0	813	4		7	9	Ŋ	0
Kickxia spuria	Scro	AR			-0.07	25	'n	а	Th		h 0			ω	3		622	0	7	3.9	16.2	737	4		7 4	7	2	0
Knautia arvensis	Dips	z		_	-0.88	100		a	μc		о Ч			7	4		1707	478	4	3.8	15.2	919	6, 7		7 3	8	4	0
Kobresia simpliciuscula	Cype	z		_	0.58	20	_	۵	ဥ		٥			_	9		18	0	0	٥. 1.	11.5	2044	11, 15		ω	ω	-	0
Koeleria macrantha	Poac	z		_	-0.29	20	_	۵	ဥ		ە ح			^	9		1250	266	7	3.7	14.7	686	7		8	^	7	0
Koeleria vallesiana	Poac	z		_	+	4		Ω	2		٥ ا			ω	7		4	0	0	4.5	16.4	868	7	-	~	∞	=	0

Taxon name	Fam	NS	SS	RS	Chg	Hght Len	en P1	P2 LF1	LF2 W Clone1	1 Clone2	E1 E2	C Origin	GB	<u>≃</u>	<u></u>	jan Tj	Tjul	Prec (Co Br Habitats	<u>ц</u>	œ	z	ဟ
Koenigia islandica	Poly					9	a		0 4		1		9	0	0	_	2.5	10	_	о 8	9	_	0
Laburnum anagyroides	Faba	AN		(1)		200	d	H.				Eur	1119	42	1		15.2	884	3, 17	9	7	7	0
Lactuca saligna	Aste	z	Z Ш	7	-1.51	75	Ø	ᆮ	о ч		დ დ		38	0	0		16.7		Co 19		_	ဖ	က
Lactuca serriola	Aste	AR		11	2.70	200	۵	얼	о ч		8		985	က	4		16.1	741	3, 17	8	7	9	0
Lactuca virosa	Aste	z		_	1.16	200	Q	얼	о Ч		8		650	က	0			693	3, 16			7	0
Lagarosiphon major	Hydr	AN					300 p	H	h Irreg			SAf	443	80	9			839	13	1	7	9	0
Lamiastrum galeobdolon	Lami	z		n 1	1.07	09	d	ភ	h Stol2		7 3		1097	16	4			855			2	9	0
Lamium album	Lami	AR		۲	-0.65	09	۵	얼	h Rhiz2		2		1903	178	Ŋ			911		7 5	7	œ	0
Lamium amplexicaule	Lami	AR		۲	-0.22	30	Ø	ᆮ	٥ د		-		1485	2	7	3.7		842	3, 4	7	7	9	0
Lamium confertum	Lami	AR		۲	-0.40	22	Ø	ᆮ	о ч		4 8		397	21	0			1097	4	7	^	^	0
Lamium hybridum	Lami	AR			1.57	99	a	£	о ч				1150	234	7		15.3	877	4	7	_	ဖ	0
Lamium maculatum	Lami	ΑN				32	d	악	h Node2		7 3	c Eur	923	15	_		15.4	869	3, 17		7	ω	0
Lamium purpureum	Lami	AR		7	-1.09	99	Ø	౬	0		7		2461	738	4		14.7	1027	3, 4, 17	9	_	/	0
Lapsana communis	Aste	ž		<u>د</u>	-0.47	92	a	ᆮ	0		7		2437	895	5		. 14.7	1059	3, 17		_	_	0
Larix decidua	Pina	Ą		(1	2.91	4600	٥	듄	0			Eur	1940	252	7	3.3	14.7	1049	1, 2, 17	7	9	ო	0
Larix decidua x kaempferi (L.																							
x marschlinsii)	Pina	AN			(r)	3000	ď	P	0 w			Gard	780	22	0	7		1134	2, 17	7 6		က	0
Larix kaempferi	Pina	Ą			(1)	3700	٥	舌	0 %			As2	774	33	0		14.6	1133	2, 17	2 6		ო	0
Lathraea squamaria	Orob	z		드	-0.36	30	۵	ნ	о Ч		7 3		634	120	0		15.0	955	1,3	3	7	9	0
Lathyrus aphaca	Faba	¥		s -1	-1.38	09	Ø	ᆮ	о ч				174	0	က		16.4	718	4, 7			4	0
Lathyrus japonicus	Faba	z		ဂ တ	-0.32	20	۵	ნ	о ч		2		64	12			15.7		Co 19	9	^	9	က
Lathyrus latifolius	Faba	AN				300	ď	h	h Rhiz1			Eur	762	ဝ		3.9	16.0	782	3, 18			က	0
Lathyrus linifolius	Faba	z		ٻ	-0.93	4	٥	ច	h Rhiz2				1962	238				1172	8, 16			ო	0
Lathyrus nissolia	Faba	z		o _	0.54	72	Ø	ᆮ					267	0	-	3.9	က	742	3, 6, 7	8	_	ဖ	0
Lathyrus palustris	Faba	z			0.23	120	٥	2					22	98	0			823	11			4	0
Lathyrus pratensis	Faba	z				8	٥	2			ъ		2636	943				1079	ဖ			2	0
Lathyrus sylvestris	Faba	z		u O	-0.36	200	р	hc	h Rhiz1		7 3		450	0		4.0 1	16.0	835	3			2	0
Lathyrus tuberosus	Faba	AN		۲		120	d	ъ	h Rhiz2		-	c Eur, As1	186	_				922	3	9	7	9	0
Laurus nobilis	Laur	A				009	۵	문	0 %		0	Eur	193	17				942	3, 17, 18, 19			ဖ	0
Lavatera arborea	Mal∕	z		_	1.20	300	٥	Ę			0		188	72					Co 18			ω	က
Lavatera cretica	Mal<	z		٦	0.15	9	Ø	ᆮ			0 -	Eur	34	_	9	5.2		875	3, 4, 16	0	5	Ŋ	0
Leersia oryzoides	Poac		N E	٠ -	-0.40	06	ď	ဍ	h Rhiz2				21	0				296	13			_	0
Legousia hybrida	Camp AR	AR		۲	-0.60		В	ᆮ			က ထ		222	0			16.1	717	4	_	_	4	0
Lemna gibba	Lemn			-	0.07	اد	0.5 р	Î			က ထ		929	72			16.0	739		_		ω	_
Lemna minor	Lemn			_	0.60	اد	д Б	Î			\dashv		2168	23		3.7	14.9	986		7 11		ဖ	0
Lemna minuta	Lemn					١	0.3 p	순			7	Am, SAm	240	2			16.1	787		_		^	0
Lemna trisulca	Lemn			ٻ د	-0.21		1 p	Ť	h Frag				1156	369		3.8	15.5	832	11, 13	_		2	0
Leontodon autumnalis	Aste	z		_	1.33	09	٥	ဍ	0 4		2		2771	942			4	1103	9		9	4	_
Leontodon hispidus	Aste	z		ٻ د	-0.59	32	٥	ဥ	0 4		7 3		1702	267	က		15.2	918	7	8		က	0
Leontodon saxatilis	Aste	z		_	0.21	20	٥	2	0 4		8		1586	618	12	_	15.3	096	7		9	ო	0
Lepidium campestre	Bras	AR		ٻ	-0.70	4	Ø	ᆮ	о Ч		7 3		886	56	_	8	5.8	801	3, 4, 17	7		9	0
Lepidium draba	Bras	AN		J	90.0	90	ď	hc	h Rhiz2			Eur	1158	33	ဝ			786	3, 19, 21	8		9	_
Lepidium heterophyllum	Bras	z		ې د	-0.51	20	۵	<u>၁</u>			80		1133	296	7	ω	۷.	1074	3			4	0
Lepidium latifolium	Bras	z		s T	1.23	120	٥	ဍ	h Rhiz2		8 4		29	0	4	_	9.9	629	9	8	7	ω	ო
Lepidium ruderale	Bras	AR		<u>۲</u>	-0.04	9	a	드	0 4		7		242	7	4	3.9	16.0	757	3, 17	9	7	7	0

Taxon name	Fam	v. N	S	R.S.	Cha Ho	Haht len	n P1	<u>Б</u>	F1	I F2 W	/ Clone1	1 Clone2	7 F1	F2 (C. Origin	GB.	α	CIT	Tian T	<u> </u>	Prec	Co Br Habitats	hitats	ц	α	z	v.
Leucanthemum lacustre x				-	_	i 	_	Ŀ	:	_		\vdash	_	_	L			. —	-	H	+	-		E	: -	:	,
	Aste	Ą				120	٥	ے	()	_	Rhiz1				Gard	813	ø	က			890	16,	17		7	2	0
	Aste	z		۲ -	-1.14	75	۵	<u>څ</u>	2	_			2	4			916	13	3.6	ဖ	1074	6, 7		8	^	4	0
	ΓIII	z		s 2		09	۵	ย	و	۲	otp		∞	က		56	14	0	რ.	15.9	811	1,6			7	ω	0
Leucojum vernum	Ξ	A		_	1.23	30	۵	U	ور	ᅩ	otp		7		c Eur		_	0		15.4	894	1	_		7	9	0
sa	Capr	Ą				200	۵	ф		>					As1	418	133	9		15.4				9	^	ဖ	0
	Poac	z		o د	0.27	120	۵	ے	O	ᅩ			7	ო			2	_	0	14.3					/	ဖ	က
	Apia	z				09	۵	hc	U	۲			7	က			28	0		13.0		Co 18			7	2	က
un	Olea	AN			,	400	d	ப	Ļ	*					As2	1265	248	10		15.4	928	3, 17			2	œ	0
e	Olea	z		<u>ہ</u>		300	۵	ம	Pn	_	0	Node1	7	က			0	9		15.7	865	1,3	_		7	Ŋ	0
Lilium martagon	≡	Ą			0.83	100	٥	U	д	_			7	4	Eur, As1		_	0		15.2	874	1, 17			7	ဖ	0
lae-ursifolium	Plum	z		0		တ္က	٥	ڪ	O	_			∞	-			0	7		16.7	891	18			ဖ	ო	4
Limonium bellidifolium	Plum	z		-	0.01	99	۵	2	O	_			∞	4			0	0	3.6	16.0	603	Co 19, 21		ထ	ω	Ŋ	Ŋ
Limonium binervosum	Plum	z		r		20	۵	ય	O	ے			7	_			0	ဝ		16.4	727	Co 18, 19,	21 8	8	ω	2	2
Limonium binervosum agg.	Plum	z		o ء	0.16	9	٥	2	O	_			_	-			9	တ		15.7	963	Co 18, 21			_	ო	4
Limonium britannicum	Plum	뮏		S		99	۵	2	O	_	0		7	-			0	0	5.4	15.7	1004	Co 18, 19,	21		^	Ŋ	4
Limonium dodartiforme	Plum	빌	7	_		9	٥	2	O	_			_	-			0	0		16.1	865	% 18			^	ო	4
Limonium humile	Plum	z		s	0.05	9	۵	2	O	_			7	-			118	0		15.2	1012	Co 21		80	7	Ŋ	ဖ
Limonium loganicum	Plum	빌	N۸	r		32	۵	hc	O	_			7	-			0	0	l		1165	Co 18			4	က	4
Limonium normannicum	Plum	z		0		20	۵	2	O	_			7	-			0	4		16.6	836	18, 19			ဖ	က	4
Limonium paradoxum	Plum	빌	2	_		20	۵	2	O	_	0		7	-			0	0		15.4		S 18		4	^	က	4
Limonium parvum	Plum	빌	2	_		7	۵	2	O	_			^	-			0	0			939	S 18			ω	ო	4
Limonium procerum	Plum	빌		S		20	۵	2	U	_			^	-			7	0	5.4	15.7	1002	Co 18, 19,	21		ω	က	Ŋ
Limonium recurvum	Plum	빌		r		36	۵	ય	O	ے			7	_			13	0	l	14.7	1163	Co 18			/	က	2
Limonium transwallianum	Plum	빌	2	_		39	۵	얼	U	_			_	-			0	0			-	Co 18			ω	က	4
Limonium vulgare	Plum	z		우 드	-0.31	9	۵	2	U	_	0		တ	-			0	က	4.3	16.0		Co 21			ω	ဖ	ဖ
Limosella aquatica	Scro	z		s 1	1.00	9	Ø	_	ے	_			Ŋ	9			13	0			828	13			2	Ŋ	0
Limosella australis	Scro	Z	۸n	r		4	а	⊥	Ļ	ч	Sto12		2	0			0	0				Co 21			7	4	_
Linaria pelisseriana	Scro	AN				30	а	⊢	Ч	Ч			6	1	Eur	12	0	2		15.9	822	3, 16		8 3	2	4	0
Linaria purpurea	Scro	Ą		(1)	3.66	100	۵	h	ပ	_					Eur		72	တ		15.5	852	3, 16, 1			_	ဖ	0
	Scro	AR		_	.30	8	۵	2	O	ᅩ			/	7			24	Ŋ			1000	3, 7			7	Ŋ	0
	Scro	z			-0.80	8	۵	2	c				Ŋ	Ŋ			8	7		15.2	935	3,6			ω	ဖ	0
alis	Capr	z		s 0	0.07	10	۵	J	ج	SW	v Node2		4	9			0	0			1008	2			7	7	0
Linum bienne	Lina	z		o u	90'0	45	Q	b hc	ပ	٢			ဝ	-		352	82	12		15.8	914	3, 7		8 4	7	2	0
Linum catharticum	Lina	z		\neg	-0.44	18	ڡ	2	O	_			/	ო			875	œ			1113	7			7	7	0
	Lina	z		s	0.43	22	۵	은	o	_	0		Ŋ	ဖ			0	0	3.2	15.3	691	7			ω	7	0
Linum usitatissimum	Lina	z				72	Ø	F	ے	_					Gard		28	9		15.7	804	3, 4, 17			_	Ŋ	0
Liparis loeselii	Orch	z	Z W	<u>-</u>	-0.38	20	۵	ے	얼	_			7	4	U		0	0	3.9	16.1	771	11		80	ω	က	0
Listera cordata	Orch	z		미	-0.32	10	d	ט	٦	Ч			4	9			96	0	4	12.8	1450	2, 10, 1	12	3 6	2	7	0
Listera ovata	Orch	z		ې -	-0.54	09	٥	U	ڃ	_			Ŋ	4			512	က	3.6	14.8	1001	1,11	_		_	Ŋ	0
Lithospermum arvense	Bora	AR		7	1.91	20	Ø	-	ے	_	0		∞	4			9	7	<u></u>	15.9	755	4		4	^	Ŋ	0
Lithospermum officinale	Bora	z		ٻ	-0.59	8	۵	2	O	_	0		7	4			69	_	3.9	15.8	820	1, 3, 7			ω	Ŋ	0
Lithospermum																											
nm	Bora	z		<u>-</u>	-0.33		ď	ਹੋ	h P		Тiр		œ	က		25	0	0			941	1,3		5 4	7	4	0
4	Plan			ے	0.40	10	5 م	エ	_	_			^	7			426	က	3.3	_	1323	11, 13		9	2	ო	0
Lloydia serotina	≣	z	2	_	-	15	٥	٥	ရှ	_	Rhiz1		_	9		7	0	0		12.5	3092	15, 16			D	_	0

Taxon name	Fam	NS	CS	RS C	Chg Hght	Len	P1 P2	2 LF1	LF2	N Ci	Clone 1 Cl	Clone2	E1 E2	ပ	Origin	GB	≃	ا آپ	Tjan Tjul		Prec C	Co Br Habitats	ats L	ш	Z	တ
Lobelia dortmanna	Camp			<u>ہ</u>	-0.05	4	۵	Ì		٥ د			4 8			220	178			12.9	1635	13	00	12	υ `	0
Lobelia urens	Camp	z	2	<u>고</u>		20	۵	ဍ		о ч			8			12	0			16.1	988	8, 10	00	œ	4	0
Lobularia maritima	Bras	¥		7		30	а	ᄕ	ဥ	ە ب			ი ი	ĒĽ		738	ဗ္ဗ	13		15.7	854	18, 19	ത		, ,	m
Loiseleuria procumbens	Eric	z		٩ د		25	۵			w No	Node2		1 6			182	0				1994	15	6	2	2	0
Lolium multiflorum	Poac	Ą		-	_	100	а	Тh	þç	о ч				Eur		2069	340		3.6 14		968	2	7			0
Lolium perenne	Poac	z		우 드		20	۵	ဍ		о ч			က ထ			2743	964	4			1096	3,6	∞		9	0 9
Lolium temulentum	Poac	AR		4		06	a	ᆮ		о ч				Еu		341					822	4	7	4		0
Lonicera periclymenum	Capr	z		n -0		009	р	Ph		0 M	ž	Node2	8 2			2622					1102	1	5			5 0
Lonicera xylosteum	Capr	AN		٥	.,	200	d	Pn		0 M			_	Eur,	As1	242		0		15.2	874	1,3	2	2) /	0
Lotus angustissimus	Faba	z		o ν		30	a	두		ە ب						22					952	80	80			0
Lotus corniculatus	Faba	z		_		40	۵	ဥ		ە د			8			2801				14.5	1104	6, 7	7	4	9	~
Lotus glaber	Faba	z		우 드	-0.55	06	۵	ဥ		ە د						209				16.1	732	3, 6, 7	7	^		-
Lotus pedunculatus	Faba	z		우 드	90.0-	09	۵	2		ە د	奁	Rhiz1				2380				14.7	1072	11	7	ω		0
Lotus subbiflorus	Faba	z		0 s		30	a	ᆮ					8			98	œ	14	5.8 16		286	8	2	2		2 0
Ludwigia palustris	Onag	z		-	0.19	15	a O		£	<u>ү</u>	Node2					=					812	13	00		4	0
Lupinus arboreus	Faba	¥			1.84	200	۵	Ł		o >				Am4	4	341					825	3, 19	0	4		0
Lupinus polyphyllus	Faba	¥			_	150	۵	ည		ە ب				Am4	4	215	က				828	3, 14, 17	7		7,	0
Luronium natans	Alis	z		0 s	0.24	20	۵	Ŧ		h Stol2	212		7 2			91	က				1229	13, 14	80	7		0
Luzula arcuata	Junc	z		د		10	d	hc			Rhiz1		1 3			22	0	0			2044	15, 16	6	2		0
Luzula campestris	Junc	z		우 _		15	۵	2		노	Rhiz2		7			2725	835				1100	9	_	4	2	
Luzula forsteri	Junc	z		0		35	ď	þ		о ч			_			309	0				829	1	4	4		0
Luzula multiflora	Junc	z		0	0.28	20	۵	þ		о ч			3			2451	834				1148	80	7	9		
Luzula pallidula	Junc	z	₹	_		30	۵	ဍ		٥ د			2	ပ		7	0			16.3	253	1, 11		_		
Luzula pilosa	Junc	z		ې د		32	۵	hc		о Ч			5			2132	266			14.4	1127	1, 2	2	2		
Luzula spicata	Junc	z		<u>ہ</u>		25	۵	ဥ		h Rhiz1	iz1		1			189	0	0	1.0 1	1.5	2085	7, 15, 16	00	5	·' د	0
Luzula sylvatica	Junc	z		ᄋ		80	۵	မ		h Rh	Rhiz1		7 3			2058	621			14.1	1208	1, 16	2	2		
Lychnis alpina	Cary		₹	_		20	۵						2			7	0		Ŋ	0	1640	15	80	က		0
Lychnis flos-cuculi	Cary	z		o u		75	р	hc		о Ч			7 4			2569	292		2	2	1095	11	7	ဝ	9	
Lychnis viscaria	Cary		NΩ	د	0.01	45	ď	ပ်					7 4	ပ		28	0	0	2.2 13	13.8	926	16	80	က	4	2
Lycium	Sola	¥		J		250	۵	돈			ot			As		1104	88		00	15.7	784	3, 19	80	2	, _	0
Lycium barbarum	Sola	¥			2	250	۵	ፈ			ŏ			As					-			3, 19	80	Ŋ	, _	0
Lycium chinense	Sola	¥			2	250	۵	ፈ	듄		ot			As					-			3, 19	80	Ŋ	,	4
Lycopersicon esculentum	Sola	AN			_	150	а	ᄕ		р О				SAm	n	523	4	ნ	4.0 15.	5.6	876	17	7	2	7	8
Lycopodiella inundata	Lyco	z		o د		2	۵			ջ Կ	Node1		2			233	9				1122	10, 12	<u>ი</u>	တ		0
Lycopodium annotinum	Lyco	z		φ s		9	۵			sw No	Node2		2			171	0				1760	10, 15	9	9	ო	0 8
Lycopodium clavatum	Lyco	z		우 ㄷ	-0.52	15	۵			sw No	Node2		2			948	8				1368	10	_	Ŋ	-	0
Lycopus europaeus	Lami	z		우		100	۵	ဍ		모	Rhiz1		7			1689	347				995	1		œ	~	0
Lysichiton americanus	Arac	Ą			_	110	۵	ဍ		모	Rhiz1			Am4	4	174	24			15.1	1073	13, 14	4	တ	9	0
Lysimachia nemorum	Prim	z		٥ د		20	d	ပ	hc	N N	Node2		7 2			2217	740	က			1150	1	2	2		2 0
Lysimachia nummularia	Prim	z		우 드	-0.02	2	۵	얼	당	9 Ч	Node2		H			1266	227			15.5	895	6, 11, 14	ß	/	2	0
Lysimachia punctata	Prim	¥		4		120	۵	ည		모	Rhiz1			Eur		1127	84				666	1, 3, 17	9	9	<u>'</u>	2
Lysimachia thyrsiflora	Prim	z		0 s		20	۵	ဍ	Ť	모	Rhiz2		H			21	0				1200	11, 13	80	10	4	3
Lysimachia vulgaris	Prim	z		n 0	0.22	105	d	hc		h Rh	Rhiz2		7 5			1227	288		7	15.2	943	11	7	6	7 5	0
Lythrum hyssopifolium	Lyth	~	NΩ	7		15	а	ᄕ					8			112	ဗ	ω			222	4	80	9	9	0
Lythrum portula	Lyth	z				œ	a	ᆮ	ZH	٥ د	ž	Node1				1262	321			œ	1084	11, 13	80	თ	Ω ``	0
Lythrum salicaria	Ę Ż	z		٩ د	-0.08	120	۵	2		<u>ہ</u>	_		7			1692	827		4.0 15.	0	1024	11		တ	<u></u>	0

Taxon name	Fam	NS	SS	RS	Cha Ho	Haht Len	P -	P2 LF1	1 LF2	W Clone1	e1 Clone2	E1 E2	2 C	Origin	GB	<u>8</u>	i i	ian Ti	Tiul	Prec (S	Br Habitats	ш	œ	z	S
	Berb	Ą		_		150	٥	-		>			•	Am4	991	4		_	ဟ	786	7,0	_		9	2	0
Maianthemum bifolium	Lili	NA V	۸n	r	0.32	20	ď	G		h Rhiz2		5	ပ		4	0		2.9 1	15.0	753	1,2	2	3	3	3	0
Malus domestica	Rosa	AR			1	1000	d	Ph		0 M			ט	Gard		327	8		15.0	975	3		_		7	0
	Rosa	z		٥	0.57 10	1000	٥	壬		o ×		2 3				298	1	3.7 1	15.0	975	1,3	3	7 5	9	9	0
sens.str.	Rosa	z				1000	٥	壬											15.1	964	က				9	0
a	Malv	z		<u>ہ</u>	-0.04	80	٥	2				7 3			1423				15.6	871	9				4	0
ta	Malv	AR		۲	-0.22	90	а	Т				7 3			1196		14		15.7	781	3				7	0
	Malv	AN				20	а	Τh		0 H		9 /	၁	Eur, As					16.0	788	3, 1	17, 19			2	0
	Malv	AR		۲		150	۵	2				8			1788		4		15.3	899	3,1	17			7	0
Marrubium vulgare	Lami	z		s -2	-2.02	09	۵	2		h Rhiz1		8								861	7		9	7	œ	0
Matricaria discoidea	Aste	Ą		ٻ	-0.49	32	ø	두		0 د			⋖	As2?, Am?						1086	3, 4	4			_	0
Matricaria recutita	Aste	AR		٥	0.92	09	a	두		o ح		8	_		1588		7		15.5	868	ω 4	4	7		^	0
Matteuccia struthiopteris	Wood	AN				09	۵	2		о Ч		4 6	ပ	NHem	74	4		3.2	14.7	1108	_			7	/	0
Matthiola incana	Bras	Ą		٥	0.75	80	۵	፫		o ws		0	Ш	Eur	107	7	ဖ					19	o o		7	က
Matthiola sinuata	Bras	> ¥	2	_		09	۵	2		o ح		9			19	ω			15.6	_	8	19		_	7	_
Meconopsis cambrica	Papa	z		s	2.36	09	۵	2		o ح		5			54				14.0	1321	-		4	^	Ŋ	0
Medicago arabica	Faba	z		٥	69.0	09	a	두		o ح		9				0			16.2	781	ω,	17		ဖ	Ŋ	0
_	Faba	z		ې د	-0.43	20	а	p Th	hc	о Ч		7 2	_				13		15.0	863		17	7 4	8	4	0
	Faba	z		s -	-1.97	20	a	두		o ح		8			54	0			16.5	623	ω		က ဝ		7	0
rpha	Faba	z		s -	-1.34	09	a	ᆮ		o د		9			118	0	12	5.0 16	16.4	801	ω		0	5	2	0
	Faba	z			-0.56	6	٥	2		o د	Rhiz1	8	O		24	0		_	6.2	604		9	7	9	D.	0
iva																										
	Faba	z		s		09	d	ဍ		h Rhiz'		8 4	ပ		24	0			16.2	604			8		က	0
o.sativa	Faba	Ą				6	٥	2		o _			J	Crop	1065				15.8	268	ω O	9	7		Ŋ	0
	Scro	Ą		ٻ	-0.49	09	a	ᆮ					ပ	Eur	20	0			16.2	692	1	4, 16			က	0
	Scro	z		<u>-</u>	-0.88	20	a	ᆮ		o _			o		62					909	က		9		7	0
	Scro	z		ې د	-0.88	09	a	ᆮ				5								1220	1, 2	21			ო	0
sylvaticum	Scro	z		٦	-0.58	32	В	ᄔ							75					1532	1, 16	91			7	0
	Poac	z		٥ د	-0.17	09	۵	hc				9	O							1483	1,7	1, 7, 16			3	0
	Poac	z		ې د		09	٥	2				-								1015	-		4	7	2	0
	Faba	Ą		٢		150	۵	a Pc	ᆮ	o _				Eur?, As1?	913			3.7 1	15.8	778	ო				4	0
ns	Faba	AR		J		150	۵	2				7 3			1122				15.8	785	ω,	17			/	0
	Faba	AN		-	-1.59	40	а	ᄕ		р О			Ш	Eur, As1	427				15.7	790	3, 1	17			7	7
S	Faba	Ą		J		150	٥	2	_				Ш	Eur?, As1?	1142	56			15.7	790	ω,	17			2	0
	Lami	Ą		_	1.73	09	٥	2	_				Ш	ıır	299					854	ω,	17		7	9	0
nyllum	Lami	z		φ ø	-0.47	09	٥	ဍ	_			-	-							1091	۲,	ဗ			Ω	0
	Lami	z		<u>ہ</u>	-0.11	06	٥	2		h Rhiz2		7 3							14.7	1065	11				2	0
Mentha arvensis	Lami	z		-	-1.30	09	٥	2		h Rhiz2	•									1017	4,	11			9	0
ш	Lami	_	ΠΛ	r -0	-0.70	30	d	hc		h Rhiz2		8 3	_		242	45			15.9	698	6, 1	13	8 2	9 .	2	0
	Lami	AR		_		06	٥	2	_	h Rhiz2			U	Crop	1563				0	942	ω,	17	7 8		/	0
Mentha suaveolens	Lami	z		o د		100	٥	2		h Rhiz2		9							15.5	1151	က				9	0
ata	Meny	z		<u>ہ</u>	-0.04	30 150	<u>م</u>	ษิ	Ť	h Rhiz2		2 6								1201	11		8 10	4	ო	0
Mercurialis annua	Euph	AR) 	0.28	20	а	Th		р 0					793	22		4.0 16	16.0	779	3, 4	4, 17			7	0
6	Euph	z		o u	-0.65	40	d	hc		h Rhiz2		€ 2			2214	4		3.2 14	14.8	1045	1		3 6	2	2	0
	Bora	z	П	o د	-0.53	09	٥	2		о ч		2 3			222		0	3.8 13	4	~	Co 19		ω	_	^	ო
Mespilus germanica	Rosa	Ä		-	_	006	۵	돈	_	0	_		ш	Eur	86	_	œ	4.4	6.1	861		3, 17	9	9	9	0

Taxon name	Fam	ď.	S	RS	Cha	Haht le	P1	6	<u> </u>	I F2 W	V Clone 1		Clone2	F1 F2	C	Origin	G.B.	<u>~</u>	- C	Tian	Ē	Prec	Ċ	Br Habitats	_	ш	Z	v.
	Apia	z		_		_	_			_	1	\vdash	_	. —		0	164	0		(0	၈	0	(1)	3,6		10	ω	0
Mibora minima	Poac	z		<u>ب</u>		ω	Ø	卢	ے	_	0			-			7	0	9		16.1	861	ပ္ပ	19	တ	ю (°	7	0
	Poac	z		٦	0.31	150	۵	7	ပ	_	о Ч			-			1391	91	0		15.3	928	_		4			0
ernale	Poac	z		0		2	a	느	ے	_				Н			0	0	7	8.9	16.6	718	_	19	တ	3	6 2	0
	Scro	Ą		Ť	-0.47	20	٥	2	ņ	_		e2		\vdash	- L	Am4, SAm	1767	237	Ŋ		14.3	1106	_	3, 14	_			0
	Scro	Ą				20	۵	ے	ဍ	_	h Node2	e2			٩	Am4	966	4	4		14.5	1020	_	13, 14	/			0
Mimulus guttatus x luteus (M. x robertsii)	Scro	Z				20	۵	ء	U		Node2	26				Gard	473	125	0	2,	14.0	1162		13, 14	7	00	7	0
ıteus	Scro	A				20	۵	2	o	_		e2			(0)	SAm	186	5			13.6	1144	_		7			0
natus	Scro	Ą				40	۰	2	U			e2			4	\m4	361	13	7	3.3	14.6	1099	_	13, 14	_	80	5	0
Minuartia hybrida	Cary	z		ν v	-1.70	20	a	ᆮ	ے	_	0			9			294	0			16.0	716	_		တ			0
Minuartia recurva	Cary	z		0		2	٥	U	ნ		0			د			0	_		8.	14.2	1414	_	2	∞	4		0
	Cary	z		_	0.01	9	۵	U	ج		0			1			7	0		8.0	11.2	1679		15	∞	4	7	0
Se	Cary	z)- s	-0.75	8	۵	ਠੋ	۲	_	0			1			9/	0		1.2	11.4	2095	_	15	∞			0
Minuartia stricta	Cary	z	Z	-		10	٥	ਠ	خ	_	0			-			_	0	0		12.1	1443	_	11	တ	<u>ი</u>	8	0
	Cary	z		ς σ	-0.42	15	۵	ਠ	خ		0			4			139	8	0		13.9	1215	_	, 16	∞	4	_	0
Misopates orontium	Scro	Ä		٢	-0.89	20	a	Ė	ے	_	0			8			488	24	=		15.9	864	4		_	2	9	0
via	Cary	z		۲ د		40	a	卢	ے	Ė	о ч			7			1990	259	4	3.5	15.0	982	_	1	4			0
	Cary	z)- u		12	В	Th	Ч	Ч	0 ر			8 2			418	0			16.0	823	8	8	6		4 3	0
	Poac	z		ب د		130	٥	<u>ہ</u>	ņ	ᅩ				5			2244	897			14.2	1179	_	2	_			0
	Pyro			_	0.14	4	٥	မ	ပ	_	h Rhiz1	-		4			27	0			13.0	985	7		4			0
Monotropa hypopitys	Mono	z		ے '،	-1.09	30	٥	O	_		h Rhiz1	_		7			288	24			15.8	817	_		4	2	6	0
Montia fontana	Port	z		ے	0.14	20	a	م T		Нy	h Node			ა ი			2197	547			14.1	1198	_	11	7			0
Muscari neglectum	≡	4	NΛ	ŗ		30	d	9	Э	_	qto u	DRg	g	8			13	0			16.3	230	3	3,8	2			0
	Aste	z		ے		100	۵	h	ပ	_				7 3			1302	0	0		15.2	944	_	1, 16	4	2	7 5	0
	Bora	z		<u> </u>	-0.22	25	٥	<u>ہ</u>	ņ	ᅩ	٥			1			7	0			11.6	1623	_	', 15, 16	∞		8	
6	Bora	Ä		1		40	Ø	ᆮ	ے	ے				5			2577	748	ω		14.6	1056	က	3, 4	7	2		0
Myosotis discolor	Bora	z		u u	0.14	25	а	T	ے	h	0 ر			7 3			2317	521	14		14.4	1088	9	3	7			
	Bora	z		u	0.65	40	Q	hc	ပ	_				2			2409	757	ø	3.5	14.5	1085	1	11	2	6	9	
æ	Bora	z		ے	0.11	22	a	두		\dashv				က			1174	25	4		15.5	823	00	8, 16	ω			
les	Bora	z		ب د	-0.77	22	٥	2		۲ ک				7			2291	662	က		14.7	1037	_	11, 14	7			
da	Bora	z			0.52	22	٥	온	ن	_				7			1736	498	9		14.0	1237	_	11	9	ი ი		
	Bora	z		0		15	a	노	ے	_	о Ч			9			0	0	7		17.0	794	_	19	∞			
ä	Bora	z			0.77	20	٥	2	ن	_				4			115	0	0		13.2	1362	_	11, 14	∞	ი ი	72	
	Bora	z		_		47	٥	2	ن	_				7			1690	24	4		15.1	931	_		9			
ш	Cary	z		ے		100	٥	2	ņ	_		e1		7			927	0	0	3.6	16.0	747	_	11, 13, 14	7			0
Myosurus minimus	Ranu	¥		ب د		ω	Ø	느	<u>.</u>	_	о Ч			7 3			339	0	7		16.3	691	4	4	∞)	9	0
Myrica gale	Myri	z)- u	·	150	р	Ь	Pn	>	w Rhiz2	5		5 2			926	553	0		13.8	1353	1	2	8			0
ш	Halo	z		, L	1.00	1.	120 p	_	Нy	_	h Irreg	_		5 2			1390	327	3		13.8	1299	1	13, 14	1 2		5 3	0
u	Halo	Ą				7	200 p	<u> </u>	÷	_	h Irreg			\vdash	נט	SAm	268	7	7		16.1	838	_	13	7	12		0
	Halo	z		ے	2.63	'n	250 p	Î	<u>~</u>	_	h Irreg			7			1409	373	7		15.1	907	_	13, 14	7		7	0
ticillatum	Halo	z		ب د	-0.89	์ ดั	00 00	ī	<u>~</u>	_	h Irreg) DRa	a	2 6			360	130	0	ω	15.7	765	_	13, 14	7	12	7	0
Myrrhis odorata	Apia	AN		1	0.25	180	р	hc	ပ	_	h 0				ш	Eur	1152	147	0		14.1	1084	3	3, 17	7	. 9	7 7	0
	Naja			s	0.48	.,	30 a	보	7	_	0						28	78	0		13.8	1338	_	13	9	7	4	_
	Naja	z	₹	_				꾸	Ŋ	_	٥			8	ပ		4	0	0	9.0	16.1	009	_	13	7	7	9	0
Narcissus pseudonarcissus	=	z		_	0.87	32	۵	9	ရှ		용	-		-			949	0	က		15.6	920	က	_	_	2	22	0

Taxon name	Fam	NS	cs	RS	Chg Hg	Hght Len	n P1	P2 LF1	1 LF2	N N	Clone1 Cl	Clone2	E1 E2 C	Origin	GB	<u>∝</u>	[]	jan T	Tjul	Prec (Co Br Habitats	bitats	IL.	<u>~</u>	z	S
Nardus stricta	Poac	z		ء	-0.68	40	۵	2		٥ ٧			2		2051	1 560	က	7	14.0	1226	œ		2 2	က	7	0
Narthecium ossifragum	Lili			u u	0.32	45	р	hc		h R	Rhiz1		5 1		1628	_			13.8	1296	12		8	2	_	0
Neotinea maculata	Orch		EX	×		30	d	В		0 4			9 1			1 24			14.8	1107	7, 16		8 4	8	7	0
Neottia nidus-avis	Orch	z		ء	-0.91	47	۵	ნ					7 4		742		0	3.5	15.2	938	-		2	^	Ŋ	0
Nepeta cataria	Lami	-		ī	-1.23	100		2			Rhiz1				478				15.9	761	3, 7			^	9	0
Nuphar lutea	Nymp	_		ب ۔	-0.13	150	90 05	Î		소	Rhiz1		4		1140	4			15.1	975	13, 14		7 11	7	9	_
Nuphar pumila	Nymp	z		s	0.87	16	0 0	£		노	Rhiz1		4		ဖ	0 89			12.5	1680	13		7 11	9	4	0
Nymphaea alba	Nymp	z		u .	1.02	15	150 p	Η		h R	Rhiz1		7 3		1511	1 340			14.8	1090	13		11	9	4	0
Nymphoides peltata	Meny			s	2.81	22	200 p	主		<u>تا</u>	Irreg	Rhiz2	7 5		45		0	3.5	16.4	603	13, 14		4	^	ဖ	0
Odontites vernus	Scro	z		ب د		20	Ø	ᆮ		٥ ٧			H		2320				14.7	1047	ဖ		7	ဖ	Ŋ	0
Oenanthe aquatica	Apia	z		ب ۔		150	a	모 a	ŕ	٥ د			7		20				15.6	792	17		7 10	^	ဖ	0
Oenanthe crocata	Apia	z		ب ۔	-0.04	150	۵	2	Ť	о ч			8		1599				14.8	1124	11, 14			9	_	_
Oenanthe fistulosa	Apia	z		n -		80	d	hc	Η				7 3		804			3.9	15.8	771	11		6 /	7	9	0
Oenanthe fluviatilis	Apia	z		_		100	۵	主		ک د	Node2		7 1		235				16.0	718	14		8 10	ω	ဖ	0
Oenanthe lachenalii	Apia	z		ب ء	-0.36	100	۵	2		ە 2			8		5S	=		4.3	15.4	957	1		ω	ω	Ŋ	ო
Oenanthe pimpinelloides	Apia	z		ء		100	۵	2		ە د			0		24		0	4.4	16.2	849	ဖ			ဖ	က	0
Oenanthe silaifolia	Apia	z		s	0.37	100	۵	2		о Ч			დ 8		9/			3.7	16.3	661	9		ත න	/	2	0
Oenothera	Onag	AN			1.02	100	q	hc		0 4				Am, SAm	1185	5 38	11	3.9	15.8	839	3, 16, 1	7, 19	9 4	9	4	0
Oenothera biennis	Onag	Ą				100	۵	2		ە د				Am?	614	9	7		15.9	777	6,	17, 19	Ĺ	ဖ	4	0
Oenothera biennis x alazoviana (O. x fallax)	Onad	¥				90	۵	<u>2</u>		ە د					125		_	3.7	15.9	798	9	19	₈	ဖ	72	0
Oenothera cambrica	Onag	A				8	۵	2		٥ د				Am?	217	7 0	4	4.2	15.9	921		7, 19	9	9	က	0
Oenothera glazioviana	Onag	Ą				100	۵	2		٥ د				Am	996	9 24	9		15.9	832		19	9	9	Ŋ	0
Onobrychis viciifolia	Faba	¥		ء	-0.76	09	a	ધ		о Ч			7 4		265				16.2	710	7			ω	ဗ	0
Ononis reclinata	Faba	z	2	-	0.27	15	. 0	卢		о Ч			1		10	0 0	က	9	15.8		S 18			ω	7	_
Ononis repens	Faba	z		ب ء	-0.45	09	۵		ဥ	sw R	Rhiz2		7 3		1664	178			15.3	878	7			ဖ	ო	0
Ononis spinosa	Faba	z		ب د	-0.82	20	۵	ਠ	2	sw 0			4		724	0	0		16.0	718	6, 7		8	ω	က	0
Onopordum acanthium	Aste	AR)		200	d	ည		h 0			7 4		778				15.9	733	3, 17		8 4	9	7	0
Ophioglossum azoricum	ihdO			s		10	d	Gn			Root		5 2		2	.2 12		3	13.3	1252	8			2	7	_
Ophioglossum lusitanicum	Ophi	z	N.	_		4	۵	Б			Root		1			1	က		16.2	848	80		9	2	7	0
Ophioglossum vulgatum	Ophi	z		_		99	۵	ნ		h R	Root		9 /		1474	4 209	9	3.6	15.1	964	6, 7			^	က	0
Ophioglossum vulgatum		z			22	ç	2	ئ		2	† c c		۷		1777	200		۰ د	<u>1</u> 7 1	790	ď		٨	١	۳	-
Ophrys apifera	Orch	z		+	0.83	45	2	<u></u> 6					+		936		4	၂ ၈	15.7	807) <u> </u>		4	. 00	၂ က	0
Ophrys fuciflora	Orch	z	ΛN	٦		32	۵	ြာ		о Ч			9 2			0 9	0	4.0	16.4	992	7		4	ဝ	7	0
Ophrys insectifera	Orch	z		ے '	-1.34	09	۵	ნ					7 3		264	31	0	3.7	15.8	803	1, 7, 11		8	တ	7	0
Ophrys sphegodes	Orch	z		y s	-0.11	20	۵	ნ					-		ဖ	62 0	_		16.3	729	7			တ	က	0
Orchis laxiflora	Orch	z		0		20	۵	ნ		о ч			8 4 c				œ		16.7	800	6, 11		<u>ග</u>	ω	7	_
Orchis mascula	Orch	z		u -	-0.72	40	р	В		р 0					1962	47			14.7	1073	1, 7, 16)		7	4	0
Orchis militaris	Orch		NΩ	ı		45	d	ъ		0 4					_		0		16.3	694	7		2 3	ဝ	7	0
Orchis morio	Orch	z		ء	-0.98	20	۵	ნ							931	12		3.9	15.8	801	6, 7			7	က	0
Orchis purpurea	Orch	z		s	0.56	20	۵	ნ		о ч			7 3		m	36 0	_		16.5	748	1			ω	က	0
Orchis simia	Orch		0\	_		9	۵	ნ					8 3		10		0	ω _.	16.4	269	7		3	œ	7	0
Orchis ustulata	Orch	z		S -	-1.77	15	۵	ნ		0 د			7 3		265				15.7	777			4	ω	7	0
Oreopteris limbosperma	Thel	z			-0.18	6	۵	2		٥ د			7 3		1585		0	2.8	13.7	1323	1, 16		9	4	က	0
Origanum vulgare	Lami	z		<u>-</u>	0.10	92	۵		ဍ	٥ د	ž	Node1	2		1148	8 179	0		15.3	868	7, 16	_	4	_	4	0

Taxon name	Fam	V.	ď	ď	Cha	Hobt	lan D1	71 P2	7 F1	1 F2	W C	Clone1	of Clone?	\vdash	F1 F2	Ċ	Origin	G.B.	<u>~</u>	-	ian L	Ē	Prec	ح	Br Hahitate	_	Ω	z	v.
Ornithogalum angustifolium				_	_		_	-	יש	. —	_	용	=	 	. —		Eur	1139	<u>∞</u>	12	3.7	15.5	848	3	1, 3, 7, 8	٠	9	4	0
Ornithogalum pyrenaicum	⋽	z		v	0.14	75		۵	පි		_	gp			9			33	0	0		16.2	773		1,3	5	5 7	2	0
	Faba	z			-0.18	9	0	. ത	드		ح	0						1002	20	12		15.5	935		8		4	က	0
Ornithopus pinnatus	Faba	z		_		80	w	a	드		_	0			8			3	0	7	7.0	16.4	832		8, 10	ω	3	2	0
Orobanche alba	Orob	z		σ	-0.38	22	10	a G	드	ဇ်	ے	0		П	Н			92	42	7	0.4	13.7	1493		16			7	0
Orobanche artemisiae- campestris	Orob	z	Z	_		9			<u>_</u>	Ģ		c			00			œ	C	C	4 ت	7.5	753	S	18			ינ	C
caryophyllacea	Orob	z			0.01	4		י מ	ഗ		+	0			3 0	O		2	0	0	1.7	16.4	782		18	0 00) (၁)	7	0
	Orob	z			-0.33	75			ြာ		ح	0			+	O		267	0	0	3.6	16.2	713		3,7			က	0
зе	Orob	z		_	0.20	09		p	Б	드	ح	0						160	122	11	4.9	15.5	1004		1, 3, 16		5	2	0
Orobanche minor	Orob	z		_	-0.20	09	(0	α σ			ح	0			က			800	0	4	0.4	16.1	774		4, 5	7	8	9	0
Orobanche purpurea	Orob	z	?	_	0.50	45		a		ᆮ	_	0						22	0	12	4.9	16.3	776		3, 6	7		7	0
Orobanche rapum-genistae	Orob	z		s	-0.35	82		۵	ნ		ᅩ	0			8			422	၉	4	4.1	15.7	890		10	7	5	7	0
	Orob	z		_		9		b	G	Т	ᅩ	0				၁		7	0	0	3.1	15.3	666		3, 7	7 (9	0
	Pyro	Z			-0.40	2		d	ပ		ᅩ	Rhiz1			-			228	7	0	1.4	12.2	1568		2, 10, 16		2 2	3	0
	Osmu	z		_	0.56	160	_	۵	2		ᆮ	0			8			735	9/9	4		14.5	1225		1, 11			4	0
Otanthus maritimus	Aste	z	Ä	×	-1.49	30		۵	ဍ		ᆮ	Rhiz2			9			23	9	က		16.0	874	රි	19	6	2	7	က
Oxalis acetosella	Oxal	z		_	-0.74	9		۵	2		_	Rhiz1			5			2393	791	7	3.4	14.4	1138		1, 2, 16	4		4	0
Oxalis articulata	Oxal	Ą				52	_	۵	2		_	Rhiz1			_	ری	SAm	541	92	4	4.4	15.8	861		3, 17, 19		3	7	0
Oxalis corniculata	Oxal	AN			1.62	15		pa		Th	_	Node2	2				Unk	866	32	11	3.9	15.8	843		3, 17	, 7	4 6	2	0
Oxalis debilis	Oxal	Ą				20	_	۵	පි		_	DRg			_	3)	SAm	137	9	12	4.3 E	16.1	784		3, 17	, ,	9		0
	Oxal	A				2		р		드	ᆮ	Node2	2			_	Aus, NZ	323	1	œ	3.8	15.7	782		3, 17	7	9		0
ta	Oxal	A				20	_	۵	පි		ᆮ	DRa				ری	SAf	146	Ŋ	7	4.6	15.8	927		3, 17		5	2	0
	Oxal	AN				20	-	р	g		ᅩ	DRg				ری	SAm	29	_	11	5.1	16.1	892		3, 17	9			0
ıprae	Oxal	AN				30	_	d	дS		Ч	DRg					SAf	10	0	10	5.9	16.1	861		3, 4	7 2			0
	Oxal	Ą			-0.09	4		a	드		ᆮ	Rhiz1				1	As2, Am	396	27	4		15.7	895		3, 17	9	5	2	0
	Poly	z			-0.71	8		۵	2		_	0			9			311	24	0		12.1	1940		15, 16				0
estris	Faba	z	₹	_		20		۵	2		_	0			5	ပ		က	0	0		11.5	1392		7	ა ი			0
	Faba	z		٦	0.16	13		d	ဍ		ᅩ	0			4			16	0	0	2.5	12.9	1141		7, 18, 19				0
	Poac	Ϋ́				9	.0	a	드		_	0					Crop	329	ဖ	9	0.4	16.0	787		1, 4, 17	თ		9	0
ne	Рара				-1.79	42	το	a	드			0			-			874	84	9	3.7	15.7	759						0
	Рара				0.23	8	.0	a	드		_	0			8 4			1875	402	13	3.7	12.0	910		3, 4	<u></u>	2		0
ш	Рара				-0.35	20	το	a	드		_	0			9			357	ဗ္ဗ	9	4.1	15.9	776		4	,	8	4	0
	Рара				-0.41	09	,,,	a	드		_	0						1712	370	4		15.3	877		3, 4	7			0
ım	Рара				2.54	9	10	a	드		_	0				۳	Eur?	1600	8	12		15.3	868		3, 4, 17		7	ω	0
	Poac	z		v	60.0	9	τυ	a	ᆮ		_	0			0			109	_	2	4.	16.4	709	ပိ	18, 19, 21		2	4	4
	Poac	z		_	0.14	52	·u	a	ᆮ		_	0			8			347	ස	2	4.5	15.7	876	ပိ	21	ω	2	9	2
osa	Scro	z		_	0.64	20		a	ᆮ		ᆮ	0			-			165	5	7	5.1	15.4	1129		3,5		7	2	0
Parietaria judaica	Urti	Z		п	0.08	25	_	d	hc		ᅩ	0			9 2			1336	317	14	4.1	15.6	865		16, 17	7	4 8	2	1
	≣	z		드	-0.68	40	_	۵	G		ᅩ	Rhiz2			5 4			714	0	0	3.2	15.3	877		1	3 (2 9	9	0
ris	Saxi	z		_	-0.84	20		α	ဥ		ᆮ	0			5			1091	302	0	3.0	13.7	1236		11		8	က	0
Pastinaca sativa	Apia	z			-0.39	180		Q	ဍ		ᆮ	0			7			1011	0	7	3.8	16.0	774		3, 6, 7		7	2	0
	Scro	z			-0.88	09		Q	2		ᆮ	0			5			1744	583	_	3.3	14.0	1226		11	80	8	7	0
	Scro	z		L L	-1.28	22		d	ဍ		ᆮ	0			7 3			2118	744	6	3.4	14.1	1202		10, 12, 14			2	0
virens	Bora	AN			1.81			a	ည	\dashv	ح	0		\exists	\dashv		Eur	1753	88	7	3.6	15.2	915		1, 3, 17	9		7	0
Persicaria amphibia	Poly	z			0.27	60 2	200 p	2	Ì	2	_	Rhiz2	lrreg		2			2013	644	=	3.7	14.9	986		11, 13		9	9	0

Taxon name	Fam	NS	SS	RS	Chg	Hght L	Len P1	P2 LF1	:1 LF2	≥	Clone1 (Clone2	E1 E	E2 C	Origin	GB	<u>~</u>	<u></u>	ljan T	Tjul	Prec (8	Br Habitats		~	z	တ
	Poly	z			-0.44	80	٥	2		모	Rhiz1			2		1355	43	0	က	14.8	1021	9		9	2		0
	Poly	z			-0.41	22	Ø	ᆫ		о О			Н	9		2041	740	တ	3.7	14.8	1093	11,	, 13, 14	7	9 /	9	0
æ	Poly	z		_	-0.04	100	Ø	卢		٥ د			H	ဟ		1881	434	9		15.1	928	4	4, 11	7			0
Persicaria maculosa	Poly	z		u	-0.95	80	В	Τh		0 4			3 2	2		2578	934	12	3.6	14.6	1077	3, 4	4	_		7	0
	Poly	z		_	-0.06	4	a	卢					H	Ŋ		296	83	-		15.2	1003	13	13, 14	7			0
Persicaria mitis	Poly	z		s	-0.90	22	Ø	ᆫ					Н	က		203	31	-		15.9	780	13	13, 14		8	0	0
Persicaria vivipara	Poly	z			-0.58	30	۵	2			Rhiz1		2	ဖွ		446	2	0		12.2	1588	7,	7, 15				0
Persicaria wallichii	Poly	Ą			0.59	150	۵	ြာ	_	모	Rhiz2		-	_	As1	330	145	0		14.8	1149	ო					0
Petasites albus	Aste	A			0.01	20	۵	ษิ		모	Rhiz2				Eur	332	10	0	2.8	13.9	1000	1,3	8			2	0
Petasites fragrans	Aste	Ą			0.80	9	٥	ဇ်	_	도	Rhiz2				Eur	1328	582			15.3	941	က				9	0
	Aste	z		_	-0.15	120	٥	ဇ်	_	도	Rhiz2			e		1825	269			14.8	1002	14					0
Petrorhagia nanteuilii	Cary	z	Z E	-		20	a	卢		ە د			80	7		9	0			16.7	774	S 19				7	က
	Cary	A A	S.			20	a	卢		ە د				က	Eur	5	0			16.5	613	∞			3		0
sens.lat.	Cary	z		_	-0.68	20	В	노					ω	က		9	0			16.7	774	ώ	19	Ш	Ш		_
Petroselinum crispum	Apia	AR		Ė	-0.34	75	Ω	2		ە د					Crop	401	42			15.8	819	'n	17			r,	_
Petroselinum segetum	Apia	z		_	0.12	100	۵	2		٥ د			ω	7		482	0			16.2	751	m´	3, 4	ω			0
Peucedanum officinale	Apia	z		_	0.29	200	۵	2		٥ د			H	က		10	0			16.7	_	S 19			2	4	0
ım	Apia	AR			0.03	100	ď	hc		р Р					Eur	184	21			13.5	1127	2					0
•	Apia	z		S	-0.07	150	q	hc					2	4 c		47	0			16.1	631	11		2	2 6	5	0
3	Poac	z		_	0.23	200	۵	Ť	Б Б		Rhiz2			9		2449	753			14.6	1044	1	11, 14		6		_
ensis	Poac	A		Ė	-0.32	120	Ø	느		о О			H	H	Eur?	1102	9			15.5	856	က်	3, 17				0
	Poac	Ą				45	Ø	느					Н	_	Eur	88	4			15.9	200	4	4, 17		2	2	0
nectilis	Thel	z		_	-0.22	40	٥	ြာ	_	모	Rhiz2		2	9		1017	88			13.1	1515	-	1, 16		4		0
	Poac	z		s	-0.30	20	d	hc			Rhiz1			ပ			0	0		10.8	1770	11	11, 15				0
ш	Poac	z		_	-0.56	17	a	卢		ە د				က			8	တ		15.3		S 19				ω	_
	Poac	z		_		20	٥	암		о Ч			ω	9			82	4	3.5	15.1	942	3,6	9		7		0
6	Poac	z		<u>.</u>	-0.10	09	۵	2						م د			0	0		16.2	621	∞				2	0
	Poac	z		_		150	ď	hc					7 7	4			672	3		14.8	1023	რ	9				0
Phleum pratense sens.lat.	Poac	z		L	-0.33	100	d	hc					_	4		2429	719	10		14.7	1047	3,6	9		2 2	9	0
Phragmites australis	Poac	z		_	0.43	270	٥	순	<u>ნ</u>	도	Rhiz2		9	ဖ		2182	785	7	3.7	14.7	1055	7		7	10	9	7
Phyllitis scolopendrium	Aspl	z		_	0.45	09	٥	2		٥ د				e		2115	934			14.8	1048	<u>_</u>	1, 16		2		0
	Eric		NN	_		20	٥	ნ		o >			Н	က		က	0			10.6	1829	10	10, 15		ω		0
ubiense	Apia	z	۸n	_	0.07	120	ď	ધ		р О			7	က		14	0	0		15.5	1279	1,	1, 10				0
a)	Camp	z		s s	-0.16	20	٥	2					D.	က		22	0	0	3.9	16.3	908	7				m m	0
picatum	Camp		2	_	-0.73	8	٥	2						က		∞	0	0		16.4	826	–	က	2	2		0
	Pina	Ą				4600	۵	준		o ≯			4	ပ ည		1460	120	7		14.7	1054	7					0
	Pina	Ą				2200	۵	舌							Am4	1144	212	_		14.1	1223	7		7		2	0
	Aste	AR			0.77	80	a	요	2	ە د			ω	က		1191	22	10		15.9	795	ຕ໌	4	_	2		0
	Aste	z		u	90.0-	92	ď	hc		0 4			1 2	2		882	0	8	ω,	16.0	781	2		8	4 8	3	0
9	Aste	Ą				20	Q	2		모		Stol2	4	က	Enr	1343	69	4	3.4	14.9	985	eń	17	œ	4	2	0
	Aste	z		_		13	۵	2		ь	Sto12		-	ပ က		က	0	0	3.5	11.5	1153	ḿ	16	ω	7	4	0
Pilosella flagellaris subsp.bicapitata	Aste	Ä	3	_		13	٩	온		٦ Ş	Stol2		4			ო	0	0	3.5	11.5	1153	16		ø	5	n	0
Pilosella flagellaris subsp.flagellaris	Aste	Z				5	۵	2		م بې	Stol2				Eur	72	0	0	3.0	6.4	786	ო		ω	7	4	0
rum	Aste	z		_	-0.59	12	۵.	2		h	Sto12		7	3		2629	839	12	3.5	14.5	1094	7			7	2	0
			1	1					-				-											-	-		Ī

	Б В	ď.	S	٧. ص	Cha	Haht	P P	P1 P2) I F1	F2	∑ }	Clone1	Chne2	F1 F	ر ان	Origin	G.B.	2	<u>.</u>	Tian	ī	Prec	Ç	Br Hahitats	_	α	z	v.
Pilosella peleteriana	Aste				_	ი			ا	_		. —	2		1 .		2	1	12	5.2	16.1	871	-	7. 16		m	. 7	, 0
Pilularia globulifera	Mars	z		o	-0.03	_	9	۵	主			Rhiz2		7			312	2 24		က	14.8	1040	0	13	_		7	0
Pimpinella major	Apia	z		_	-0.16	9		۵	2		о ч			7	_		584	4 109	0		15.5	819	0	9	<u>'</u>	5 7	9	0
Pimpinella saxifraga	Apia	z		_	-0.31	_	_	۵	2		о ч			7			1938	8 391			15.0		m	7		7	က	0
Pinguicula alpina	Lent	NA	EX	×		2	_	d	hc		0 4			1 4				1 0		3.0	13.6		2	11	6	8 8	2	0
Pinguicula grandiflora	Lent	z		0		œ		۵	þ		о ч			7 1							14.7	1270	0	10, 12		4	7	0
Pinguicula lusitanica	Lent	z		_	-0.83			۵	ဍ		о ч			7			200	939			13.7	1475	ıo	10, 11			7	0
Pinguicula vulgaris	Lent	z		_	-0.76		_	۵	2		0 ح			4			1523	3 484			13.6	1305	ıo	11, 12	80	9	7	0
Pinus contorta	Pina	¥				2500		۵	둡		o ≥					Am4	444	4 116			14.0	1302	0	2			7	0
Pinus nigra	Pina	AN				4200	_	۵	占		0 %					Eur	1009	9 25			15.5	889	0	1, 2, 17, 19	2		7	0
Pinus sylvestris	Pina	z		S	0.40	3000		۵	占		o >			4	_		92	5 0			11.7	1930	0	2	/	2	7	0
Pisum sativum	Faba	PC				200	,,,	a	ᆮ		ە د			0		Eur	137	7 10			15.6	896	(O	3, 4	7		^	0
Plantago coronopus	Plan	z		_	0.16			۵	2		ە د			8			1445				14.8	1065	IO	3, 6, 18	80		4	7
Plantago lanceolata	Plan	z		_	1.35	15		۵	2		h Rhiz	ÍŽ1		8	Ē		2804	4 985			14.5	1105	IO	6, 7		5	4	0
Plantago major	Plan	z		_	0.09		_	d	ρς		о Ч			6 5			2766			3.5	14.5	1102	2	3,5	2		7	0
Plantago maritima	Plan	z		_	-0.28			۵	2		о Ч						1295		80	3.8	14.0	1248	රි	15, 21		9 2	4	က
Plantago media	Plan	z		_	-0.79			۵	2		모	ÍŽ1		7 5			1243	3		3.5	15.6	804	4	7			ო	0
Platanthera bifolia	Orch	z		_	-1.67			۵	ē		ە د			5			949			3.5	14.3		ın	1, 10	9	9	7	0
Platanthera chlorantha	Orch	z		_	-0.88			۵	ē		ە د				-		1163	3 251		3.4	14.7	1147	_	1,6			4	0
Poa alpina	Poac	z		S	-0.31			a	þ		о Ч		DRi	1 6			72			9.0	11.5	2142	2	15	2	2 2	က	0
Poa angustifolia	Poac	z		_		2		۵	2		모	Rhiz2		0			831			3.7	15.8	790	0	7,8	<u>'</u>	7	2	0
Poa annua	Poac	z		_	0.83			a	ᄕ	ဥ	ە د			9			2792			3.5	14.5	1105	IO	3, 4, 5, 6	2		/	_
Poa bulbosa	Poac	z		S	0.63	35		۵	2		ە د	Δ	DRi	8			7.			4.6	16.4	741	გ	19		3	7	0
Poa chaixii	Poac	Ą			-0.05	_		۵	2		0					Eur	169			3.1			0	-	7,	5	2	0
Poa compressa	Poac	z		_	0.21	20		۵	þ		h Rh	Rhiz2		7 3			1063			3.6	15.6	820		3		4 7	4	0
Poa flexuosa	Poac	z	₹	-		22		۵	2		0			1	-					9.0-	10.5	1907	_	15, 16			7	0
Poa glauca	Poac	z		တ	-0.48			۵	2		ە د			2			62	2 0		1.	11.6	2252	0	15, 16	<u></u>	5	က	0
Poa humilis	Poac	z		_		9		۵	2		모	Rhiz2		ن			1865			3.4	14.3	1134		6, 19			4	7
Poa infirma	Poac	z		S	1.33			a	ᆮ		0 ح			0			54			5.9	16.3			3			2	0
Poa nemoralis	Poac	z		_	0.27		_	d	γ		о Ч						196			3.2		1015		-	4	9	2	0
Poa palustris	Poac				-1.55		_	۵	2		о ч			2		NHem	132	2 12	2	3.7			6	11, 13, 14	2	9 7	9	0
Poa pratensis sens.lat.	Poac			_	0.60	28	_	a	ည			Rhiz2		_			2766			3.5			2	3, 5, 6, 7	7		2	_
Poa pratensis sens.str.	Poac	z		_		75	_	۵	ည		h Rh	Rhiz2		_	-		1637	7 423		3.6	14.8	1017	_	3, 5, 6, 7	7	9	2	0
Poa trivialis	Poac	Z		ㅁ	1.10			d	hc		р 0		Node1	6 4	_		272	1 903		3.6			ıo	1, 3, 6	7	9 9	9	0
Polemonium caeruleum	Pole	Z		-	1.17		_	d	hc		0 4			5 4	၁ †		16		0 (1.9		_	co	16		2 2	9	0
Polycarpon tetraphyllum	Cary	Ϋ́		_	-0.04	52	,,	a	ᄕ					9			16	9		6.3			<u>س</u>	3, 4, 17	6	9	4	0
Polygala amarella	Poly	z	3	_	-0.10		_	۵						2	ပ		18			2.8		_	_	7			_	0
Polygala calcarea	Poly	z		_	-0.37		_	۵			о ч			-			153			3.7	16.2		ω.	7		8	7	0
Polygala serpyllifolia	Poly	z		_	-0.50		_	d	ი ს		о Ч			7 2			2150		_	3.4		1200	0	8, 10, 12		7 2	7	0
Polygala vulgaris	Poly	Z		ㅁ	-1.14	25	_	d	ch		р Ч			7 3	_		2176	9 9		3.5	14.4	1	4		8	9 9	3	0
Polygonatum multiflorum	Ξ	z		_	0.27			۵	Б		h Rh	Rhiz2		7			268			3.6		829	0	_	4	2 7	9	0
Polygonatum odoratum	≡	z		S	0.34			۵	Б		모	Rhiz2		7 5			48	8	0	3.1		1091	_	1, 16	2		က	0
Polygonatum verticillatum	⋽	z	?	-		8	_	۵	Б		h Rh	Rhiz2		-	_		10			1.2	13.1	1061	_	_	4	5	2	0
Polygonum arenastrum	Poly	AR				20		a	上		о Ч			9			1937			3.7	14.9	1008	8	3, 4	7		9	0
Polygonum aviculare	Poly	z		٦		30		a	Ц		0 4			9 9			2030		9 2	3.7	14.8	1039	0	4, 17	7	9 2	7	0
Polygonum aviculare agg.	Poly	z		_	-0.70			a	ᆮ		٥ د			9	-		2605	2 306		3.6	14.6	1073	<u>m</u>	3, 4, 17		7	9	0

Taxon name	Fam	NS	CS	RS Chg	J Hgh	Hght Len	7	P2 LF1	=1 LF2	S ≥	Clone 1	Clone2	E1 E2	5 C	Origin	GB	<u>≃</u>	<u></u>	Tjan T	Lin	Prec	ပိ	Br Habitats	<u> Т</u>	2	z	S
Polygonum boreale	Poly	z		s	2	20	Ø	돈		٥ د			4			109	0	0	3.6	12.4	1084		4	^	5	9	0
шг	Poly	Z Z	_	r 0.21		20	٥	ਨ		0			9			16	_	4	6.0	16.2	950	ပိ	19	တ	3	4	က
ш	Poly	z		n 0.0		20	a	ᆮ		o ح			9	~		302	75	တ	6.4	14.8	1102		19	တ		00	က
	Poly	AR			.7	20	а	Т					7 3	_		274	0	4		16.1	738	Ì	4	8	8		0
	Poly	z		_	4	40	۵	얼	Б	호	Rhiz1		0			196	157	-		15.1	1102	<u> </u>	3, 16	9			0
Polypodium interjectum	Poly	z	Н	_	4	40	۵	hc	Б	호	Rhiz1		7 2	٥.		1188	487	12	3.9	14.9	1074		1, 3, 16	2	5		0
	Poly	z		_	4	40	۵	은	Б	호	Rhiz1		2	~		1795	523			14.3	1158		1, 3, 16	2			0
lat.	Poly	z		n -0.03		40	۵	얻	В	호	Rhiz1		<u> </u>	~		2496	916	12		14.4	1133		_	2			0
sis	Poac	z		s 0.60		80	a	Ч		о Ч			9			45	0			16.6	661		9	8	ľ	_	က
	Dryo	z		n 0.54		09	۵	2		o ح			7 5	10		1618	314	ო		14.4	1145		1, 16	Ŋ	2		0
	Dryo	z		n -0.76		30	۵	2		o ح			4	"		181	20	0	4.	12.1	1857	Ė	7, 15, 16	9			0
Polystichum setiferum	Dryo	z		n 1.47		120	۵	2		o د			9	٥.		1249	748	9	_	15.0	1032		_	4	5	9	0
Populus alba	Sali	A V			2000	00	۵	돈		<u>×</u>	Root			Ш	Eur, As1	1531	116	9	3.6	15.3	867		3, 17, 19	9			0
Populus alba x tremula (P. x canescens)	Sali	AN		0.97		0(۵	듄		× ×	Root			Ш	Eur	1145	110	7	3.8	15.6	819		1,3	9	9	5	0
Populus nigra sens lat.	Sali	z	T	n 0.65	3000	00	۵.	돈		<u>×</u>	Root		7			692	99	7	3.6	15.7	800		3, 14	9	8	7	0
Populus tremula	Sali	z		n 0.88		00	۵	돈		<u>×</u>	Root		5	10		2248	414		က	14.5	1102		1, 16		7)	9	0
utifolius	Pota	≥ ×	_	r 0.05	ठ	100		Ŧ			DRa		7	~		32	0	0		16.4	702		13		12 7		0
	Pota	z		n 0.30	õ	280		Ŧ		드	Irreg	DRa	4	"		237	142	-		14.1	1188		13		12 6		_
ldii	Pota	z		n 1.66	96	09	۵	H		ᅵ	DRa		2	"		1461	317	7	3.6	14.7	1027		13, 14		12		0
	Pota	z		s 0.03	33	70		Ŧ		노	Irreg	Rhiz2	8	~		142	140	7		12.1	893		13	7 1	11 8	2	0
Potamogeton compressus	Pota	z		s -1.68	82	6	۵	Ŧ		ᆮ	DRa		_	10		134	0	0		15.9	269		13				0
	Pota	z	Н	_		150	۵	H		호	Rhiz2	DRa	8	10		1541	358	ω	3.7	15.2	893		13, 14	7 12		9	_
Potamogeton epihydrus	Pota	N VU	_	r 0.11	11	190	р	Hy		h	Irreg	DRa	5 0			2	0	0		13.0	1288		13	8 1	12 5		0
	Pota	z	Н	s 0.63	33	30	ď	Hy		h R	-	DRg	Ĥ			161	63	0	9	13.3	1109		13		2 7	, 5	1
	Pota	z		s -1.06	90	150	۵	H		ᅩ	DRa		5 6			270	43	0		15.4	782		13	7 1	12 7	5	0
	Pota	z		n 0.67	37	80	۵	Ť		드	Irreg	Rhiz2	5	(0)		473	163	0	က	13.8	1170		13, 14	7 1	2	9	0
	Pota	王		ø		120	۵	主		도	Irreg	Rhiz2				100	92	0	3.5	14.3	1138		13, 14	7	12 6	4	0
Potamogeton gramineus x perfoliatus (P. x nitens)	Pota	王				250	۵	全		_ <u>=</u>	Irreg	Rhiz2				216	113	0	3.5	13.6	1257		4	7 1	12 6		_
Potamogeton lucens	Pota	z		n 0.2	.25	250		H		h	Irreg	Rhiz2	7 4	_		456	171	_	7	15.5	832		13, 14	7 12			0
	Pota	z	Н	_		100	۵	Η		ㅂ		Rhiz2	5	·~		2340	648	9		14.5	1091		11, 13, 14	7 11			0
	Pota	z		r -0.18	8	250	۵	Ť				Rhiz2	8	(0)		15	0	0	3.9	16.4	761		14			2	0
6	Pota	z	\dashv	n 0.96	96	190		Ť					-	(C		90	155	0		14.7	994				12 6		0
	Pota	z		_		230	۵	H		호	۵.	DRg	_	·C		1165	242			15.3	844		13, 14				7
	Pota	z		_		300	۵	£				Rhiz2	2	(C		1056	275			14.6	1026						_
Sn	Pota	z		_		10 70	۵	Į	٤			Rhiz2				1841	582	2	3.3	13.9	1254		11, 12, 13	8	10 4		0
sns	Pota	z		n -0.26	9	300	۵	Ŧ				Rhiz2	4	"		252	8			14.1	1178		13				_
S	Pota	z		n 0.77	7	2	۵	Į			DRa			(0)		806	146			12.1	877			7 1			_
	Pota	z		r 0.18	8	45	ď	H		h D	DRa		4 3	~		13	0	0		12.9	1115		13, 14		2 7		0
hoides	Pota	z		n 0.57		100	ď	Hy			DRa		8	4		185	0	1	3.8	16.2	739		13, 14				0
	Rosa	z				52	۵	ဥ			Stol2		-	~		1248	733			15.0	1045		9		2		0
	Rosa	z :		_		25	۵	은 .			Stol2		2	·C		2662	973	`		14.6	1083						7
99	Rosa	z :	\dagger			30	۵	은 .		o ا د	1		7			323	0	2		16.0	704		3,8	ω (3	7	0
Potentilla crantzii	Rosa	z	\exists	s -0.21		50	۵	ပ		0 د			2 4	_		86	О	0	0.7	12.0	1855		7, 16	ဆ	2		0

Taxon name	Fam	SN	CS	RS	Cha	Haht len	n 14	P2	-1	F2 W	/ Clone	Clone2	52 F1	E2 C	Origin	ain	GB	2	C	ian Ti	П	Prec (S	Br Habitats	_	ш	2	V)
Potentilla erecta	Rosa	z		_	_	_	_			۲		\vdash	-	4				7.		ιÜ	14.4	8	ω		7	_	ဗ	0
Potentilla fruticosa	Rosa	z		` _	1.44	100	۵	ፈ	5	>	0		4	ဖ			Ø	7			13.7	1366	-	16	∞	9	ω	0
Potentilla neumanniana	Rosa	z		s	-0.17	10	۵.	5	0	_			^	ო			128	0	0		14.7	994	7	, 16	_	က	ω	0
Potentilla palustris	Rosa	z			-0.21	20	۵	ত	ī.	_	Rhiz2		2	9			1672	721	-	3.4	14.0	1186	7	_	∞	တ	2	3 0
Potentilla reptans	Rosa	z		ب د	-0.62	30	٥	2	0	_	Stol2		∞	4			1882	269	7		15.1	929	ဖ		_	Ŋ	_	0
Potentilla rupestris	Rosa	^	NΛ	ľ		09	d	hc		Ч			6	3			4	0		3.0 13		934	1(16	2	4	9	0
Potentilla sterilis	Rosa	z		ب د	-0.30	15	۵	မ	0	_	Stol1		7	7				742			14.7	1071	_		2	2	2	0
Primula elatior	Prim	z		s	0.01	20	۵	2	0	_			7	ო	ပ		38	0	0			591	_	_	4	Ŋ	_	0 9
Primula farinosa	Prim	z		ς σ	-0.46	2	۵	2	0	_	0		4	2			103	0				1194	7	, 11	თ	ω	တ	0
Primula scotica	Prim	뮏		y s	-0.18	2	۵	2	0	_	0		4	-			42					1026	ပ္ပ	6, 19	တ	4	_	7
Primula veris	Prim	z		ب د	-0.32	15	۵	h	0	_	0		7	4			1632		9		15.2	006	o,	, 7	7	4	7	0
Primula vulgaris	Prim	z		ء	0.16	15	۵	2	0	_	0		7	က			2651	934				1108	-	1, 16	2	7	9	
Prunella vulgaris	Lami	z		ء	0.60	30	۵	2	0		Node1		9	9			2783				14.4	1106	9	7	7	Ŋ	9	
Prunus avium	Rosa	z		` _	1.29	2500	۵	돈	ے	>	Root		7	က				431	7	3.4	14.8	1024	-		4	2	ဖ	0
Prunus cerasifera	Rosa	Ą		Ė		800	۵	立	ے	>	0				Eur, As	7.5					15.8	803	_	1, 3, 17	9	Ŋ	_	0
Prunus cerasus	Rosa	AR		۲	-0.90	800	ď	ā	۷	>	/ Root				Eur		902				5.2	961	_	ε,	9	2	9	0
Prunus domestica	Rosa	AR			2.19	800	۵	立	ے	3	/ Root				Eur		1656				2.2	928	ຕົ	, 17	^	D.	_	0
Prunus laurocerasus	Rosa	Ą		Ė	4.70	009	۵	直	ے	>	0				Eur			345	4	3.8	15.3	953		1, 17	4	9	Ŋ	0 9
Prunus lusitanica	Rosa	Ą				800	۵	立	ے	>	0				Eur			31				876	۲,	, 17	9	2	_	0
Prunus padus	Rosa	z		_		1500	۵	立	ے	≥			2	2				189	0		13.8	1240	_		D.	9	9	0
Prunus spinosa	Rosa	Z		u u	0.40	400	d	Ph	Ч	٨	/ Root		7	3				917				032	3		9	2	7	9
Pseudofumaria lutea	Fuma	Ą		_	0.59	30	۵	2	0	_					Eur			ဓ္ဌ	9			876	m [°]	3, 17	9	9	œ	5
Pseudorchis albida	Orch	z		ب د	-0.88	20	۵	ত	<u></u>	_	0		4	က			382	110				1534	7	8,	∞	2	9	
Pseudotsuga menziesii	Pina	¥			ц)	2800	۵	돈	ے	3					Am4						15.0	1035	_	, 2, 17	ဖ	9	4	0
Pteridium aquilinum	Denn	z		ب د		150	۵	ত	ے		Rhiz2		_	9				964				1109	-	ග ූ	9	2	က	0
Puccinellia distans	Poac	z		L	3.02	09	d	hc		Ч	0		2	4							14.9	829	3	, 21	8	8	7	7 4
Puccinellia fasciculata	Poac	z		s S	-0.51	20	۵	hc		드			∞	7			97					722	9		œ	7	7	
Puccinellia maritima	Poac	z		٦	-0.27	80	٥	hc	0	ᅩ	Node2		2	-										_	တ	ω	7	
Puccinellia rupestris	Poac	z		s	-0.40	40	a	a 모	임	ح			∞	-					4		16.2		, 6		တ	/	_	5
Pulicaria dysenterica	Aste	z		u -	-0.08	80	р	hc	6	Ч	Rhiz2		∞	4			_	391		4.0 1	5.5	885	9	, 11	7	7	7	4
Pulicaria vulgaris	Aste	z	ſΛ	r –	-0.55	45	В	Т	ے	ᅩ			7	4			121	0			16.5	969	8		6	ø	9	0
Pulmonaria longifolia	Bora			s	-0.01	40	٥	2	0	_			^	-			71	0	0		16.5	810	<u> </u>	ω,	9	4	9	2
Pulmonaria obscura	Bora			_		30	۵	2	6	_			_	ဗ			_	0		7	16.1	277	_		4	ဖ	ω	0
Pulmonaria officinalis	Bora	Ą		-	1.77	30	۵	2	0	_			^	ဗ	Eur		682	∞			15.3	922		, 3, 17	2	2	ω	0
Pulsatilla vulgaris	Ranu	z)- S	-0.50	30	d	hc	6	ᅩ			_	3	c		69	0		က		664	7		7	က	8	3 0
Pyrola media	Pyro	z		ر. د	-1.09	10	۵	ટ		-			4	4			258	47	0	7	0	1197	7	, 10	Ŋ	4	2	0
Pyrola minor	Pyro	z		ب د	-0.55	7	۵	2	ပ်	ح ح			4	ဖ			228	2		9	ი	1089	۲,	, 16	Ŋ	2	4	2
Pyrola rotundifolia	Pyro	z		y s	-0.08	12	٥	2	0	_	Rhiz1		2	4			155	13			7	1072	Ω,	, 19	9	/	7	3
Pyrus communis sens.lat.	Rosa	AR			1.49	1500	۵	돈	_	>	/ Root				Eur?, A	As1?	781	9		8	5.9	801		, 3, 17	^	Ŋ	9	0
Pyrus communis sens. str.	Rosa	Ä				1500	٥	돈	ے	>	/ Root				Gard								'n	, 17	_	Ŋ	ဖ	0
Pyrus cordata	Rosa	NA	EN			400	d	立	4	*	/ Root		7	-			6	0				1129	3		9	2	2	0
Quercus cerris	Faga	Ą		Ė	2.32	3200	۵	立	ے	>					Eur		1247			œ	15.6	862		, 3, 17	9	4	9	0 9
Quercus ilex	Faga	Ą				2500	۵	直		>			ი	-	Eur							824		, 17, 19	9	က	7	7
Quercus petraea	Faga	z		ے		3000	۵	直	_	>			_	ო								1136	_		9	9	ო	0
Quercus robur	Faga	z		٦	-0.60	3000	۵	죠	ے	>	0 /		7	က				663	12	3.5 14	14.7	1049	_	ε,	7	2	2	0
Radiola linoides	Lina	z		ب د	0.87	9	В		احا	_	0		7	က			. 248	115	11	4.2 14.	7	1061	7	0	80	_	4	1

Taxon name	Fam	SN	cs	RS CF	Chg Hght	ht Len	r P	P2 LF	1 LF2	W Clone1	1 Clone2	E1 E	E2 C	Origin	GB	<u>~</u>	<u></u>	jan	Lini	Prec	ප	Br Habitats	_	T T	Z	တ
	Rann	z		ا 0		72	٥	일		ح		\vdash	5		2780	968	13		14.4	1106	9		_	9		0
tilis	Rann	z		_		0)	90 a	Ŧ		о ч	Irreg	6	m		1123	157	4		15.2	860	13,	3, 14		Ξ	7 5	
Ranunculus aquatilis sens.lat.	Rann	z		- -	-1.37	O)	90 a	모		о ч	Irreg		3		1830	430	9	ဖ	15.3	860	_	13, 14		=		
Ranunculus arvensis	Ranu	AR		-3.		90	а	T		РО		H	4		824	2	3	7	15.9	742	4		7	2	7	0
sn	Ranu	z		n Ō		40	d	ρ				-	3		1379	226	-		15.1	922	1		9	7	9	0
	Rann	z		ا ف	-0.04	J	60 a	보			Node2	-	က		361	61	2		15.3	902	-	13		_		4
	Rann	z		ا ف		40	۵	ဍ				-	က		2259	919	4		14.8	1004	o,	,7		4	7	0
Ranunculus circinatus	Rann	z		r Ö			75 p	Ŧ		h Irreg			2		275	9/	0		15.8	753	-	13, 14				0
Ranunculus ficaria	Rann	z		ت 0		22	۵	ြာ		h Otb	DRa	ω	ဗ		2648	820	4		14.5	1084	_	1,3	9	9		0
Ranunculus flammula	Rann	z		n Ö	9.0-	20	d	hc	Η	h Node1		. 2	3		2651	938	11		14.4	1122	11	1				0
Ranunculus fluitans	Rann	z		-	1.96	300		主		h Irreg	Node2		က		373	က	0		15.4	798	4	4	_			0
Ranunculus hederaceus	Rann	z		0.	0.10	9	23 a	보 a		о ч	Node2		2		1703	221	œ		14.5	1093	7	1, 13				0
Ranunculus lingua	Rann	z		- -	1.70 1	120	۵	은	Î	h Rhiz2		7	4		237	210	0	3.7	15.2	868	7			9	2	0
Ranunculus muricatus	Rann	Ą			Ĺ	40	a	ᆮ		о ч			Э	Eur	18	-	0		15.6	864	4		^	4		0
Ranunculus omiophyllus	Rann	z		n 0	52		25 a	보 d	£	о Ч	Node2		2		813	151	_		14.7	1180	11	1			2	0
Ranunculus ophioglossifolius	Rann	z	Z	_		40	Ø	드		о ч			က		4	0	7		16.5	824	-	6				0
	Rann	z		0	Ĺ	9	۵	2		h Rhiz1		<u>ი</u>	_		0	0	4		16.9	843	ဖ		∞		9	0
	Rann	z		ر م	-0.08	40	Ø	드		0			2		497	0	=		16.0	834	9		_	2		0
	Rann	z		c		ဟ	90 a	꿒		0	Irreg		m		066	151	2		15.2	806	1	1, 13, 14		7	2	0
tus	Rann	z		ے		2	180 p	Ŧ		h Irreg		, 2	9		902	284	0		15.2	942	14	4		12	8	0
Ranunculus repens	Rann	z		0.	0.55	09	۵	2		h Stol2		7	2		2784	983	4		14.5	1105	က	3,6			9	0
Ranunculus reptans	Rann	z	Z W	_		10	۵	2	î	h Stol2		4	9		တ	0	0	2.6	13.7	1467	13	က	∞		9	0
Ranunculus sardous	Rann	¥		0.	0.24	45	a	ᆮ		о ч		.,	က		244	0	12	1.4	15.9	800	က	3, 6, 13	ω	_	2	7
Ranunculus sceleratus	Rann	z		ا ف		8	a	두		о ч		2	9		1492	353	9	ω	15.4	861	_	11, 13, 14	ω	ω	80	7
Ranunculus trichophyllus	Rann	z		ء o	-0.07	Ψ	60 a	Ŧ		0 4	Irreg	3	9		1121	259	9	3.7	15.2	861	_	11, 13		12	9	0
Ranunculus tripartitus	Rann	> z	<u>۱</u>	s -1.	-1.09	9	25 a	보 d		о ч		ω,	_		79	_	0	5.2	15.8	1024	-	8		10	9	0
Raphanus raphanistrum	Bras	z		ت <u>۲</u>	-1.39	2	a	ه ۲	ဍ	о ч		ω	ю		1862	259	13	4.6	15.0	1079	4	, 19	/	Ŋ	9	0
Raphanus raphanistrum																										
subsp. maritimus	Bras	z		_	-	8	۵	р Н		ᄋ		0	_		325	108	13	4.7	12.1	1093	-	6	/	4	7	ო
Raphanus raphanistrum	c	(_								1	1	((į,	;			1	ı		(
ııstrum	Bras	A E		-		09	۵	ည ရ	-			-	23		1/9/	23/	Σ	و	15.0	941	4		/	ς.	9	0
	Rese	¥		o _		75	۵	은				-	က		1276	0	_		15.7	808	က	- 1	^	4	2	0
	Rese	AR		O		120	۵	2				ω	4		1660	428	12	ω	15.3	879	က		/	4	ω ω	0
	Rham	z		د ف		009	۵	돈		o ≯			4		857	88	0		15.8	783	_		^	2	\ \	0
tifolius	Scro	¥		Ρ̈́		09	Ø	ᆮ				7	4 E	Eur, As1	8	0	0	3.1	14.6	808	er i	, 4, 7	/	ဖ		0
	Scro	z		n Ö		20	а	느		р 0		_			2629	820	9		14.4	1115	9		7	2		0
icum	Eric	Ą		-		200	۵	F			Node1		Ш	Eur	1966	202	9		14.6	1111	_	1, 10, 16	2	2	3	0
Rhynchospora alba	Cype	z		ا O		30	۵	2		h Rhiz1		_	ဟ		624	407	0		14.0	1400	12	2	ω	တ	,	0
Rhynchospora fusca	Cype	z		s 0		99	۵	2		h Rhiz2		_	2		46	94	0		14.7	1205	-	2	တ	တ	რ	0
Ribes alpinum	Gros	z		s 0		200	۵	ڇ	L	o *			3		20	0	0		14.2	1084	_	, 3, 16	2	2	8	0
Ribes nigrum	Gros	Ą		-	1.76 20	200	۵	Æ		o *		7	4 E	Eur, As1	1749	213	7		14.9	995	_	1, 3, 14	2	တ	9	0
Ribes rubrum	Gros	NA		n 1.		200	d	Pn		0 M			2		1874	0	2	3.3	15.1	944	1		2	2) /	0
	Gros	z		s O	-0.12 20	200	۵	F.		o *		r)	ე წ		118	0	0		13.2	1095	_	1, 16	4	9	<u> </u>	0
Ribes uva-crispa	Gros	AN		o.		100	۵	-F		0 %				Eur	2130	312	4		14.8	1006	_	, 3	2	2	9 2	0
cia	Faba	7			27	2700	۵	돈					∢	Am6	266	-	4	<u></u>	16.0	748			7	4	9	0
Romulea columnae	lrid	> z	2	_		9	۵	Б		h Ofb		ი ი	_		2	0	14	6.2	16.5	842	S	18, 19	တ	4	2	0

Taxon name	Fam	NS	CS	RS CF	Cha Haht	ht len	n P1	2	F1 F2	W C:	Clone	1 Clone2	7 F1	F2 (C	Origin	GB.	<u>~</u>	<u> </u>	Tian	Ţ	Prec	CO	Br Habitats	_	œ	z	v.
Rorippa amphibia	Bras	<u> </u>	i	<u> </u>	1	120	_		- [-		. -	+	ء ا ا		5	562	179		3.7	15.7	~	_	13.14			. ∞	, 0
Rorinna islandica	Bras	z	T	+		3	- (7	È		+	c		4	4			4	6.	C	0 4	141	1266	13			00	œ	C
Rorippa microphylla	Bras	 z) c			09	í	ි ට	+	Node2		۰ ۰	۰ ،			1135	398	4	3.7	15.0	932	5 6	14	7	. ^	9 0	0
Rorippa nasturtium-				;						-													!		-			
aquaticum	Bras	z	7	_		9 00 00	о 09	Í	<u>ნ</u>	_	Node2		∞	4			1678	281	4	ი ი	15.0	988	13,	, 14	7 10	<u>^</u>	^	0
Rorippa nasturtium- aquaticum agg.	Bras	z		ء ٻ	-0.56	30	a 09	í	<u>ව</u>		Node2		ω	4			2317	888	9	3.7	8.4	1027	7	11, 13, 14	7 10		7	0
Rorippa palustris	Bras	z	T					È	L		0		2	9			1353	332	7	3.6	15.2	914	11	11, 13		3 7	7	0
Rorippa sylvestris	Bras	z		+		09	۵	2			Rhiz1		7	က			1129	107	7	3.6	15.4	886	1	11, 14	œ	8	7	0
Rosa agrestis	Rosa	z	T	ဟ	-	150	۵.	Ţ	_	>	0		7	ო			22	99	0	1.7	15.6	836	^			8		0
Rosa arvensis	Rosa	z			-0.17	150	. 0	돈	_	>	0		7	ო			1471	385	0	3.9	15.4	910	ო				2	0
Rosa caesia	Rosa	z		c	2	200	۵	ሷ		>	0		7	က			729	23	0	2.8	13.8	1151		3	œ	3 7	က	0
Rosa canina agg.	Rosa	z		_	က	300	۵	P	۲	>	0		7	က			2576	856	12	3.7	15.1	993	1,3	3		5 7	9	0
Rosa canina sens.str.	Rosa	z		_	m	300	۵	ፚ		>	0		7	ო			1540	285	7	3.7	15.1	993	<u>_</u>	9			ဖ	0
Rosa micrantha	Rosa	z		_	m	300	۵		_	>			7	ო			394	29	Ŋ	4.2	15.9	872	-	3,7			က	0
Rosa mollis	Rosa	z		c	_	150	٥	ፚ	_	≥	Root		2	ო			435	12	0	2.5	13.6	1138	<u>_</u>	3, 16	Ŋ	7	4	0
Rosa mollis agg.	Rosa	z		c		150	۵	ሷ	_	>			IJ	ო			1894	538	_	3.4	14.1	1189	<u>_</u>	3, 16			4	0
Rosa obtusifolia	Rosa	z		s	2	200	۵	ፈ	┖	>			7	က			193	2	0	3.6	16.1	728	1,3	3				0
Rosa pimpinellifolia	Rosa	z		ا ف	-0.05	20	۵	ਠੋ		>			7	ιΩ			924	308	9	3.8	14.4	1124	10	10, 16, 19	œ			0
Rosa rubiginosa	Rosa	z		_	2	200	۵	Æ	_	>	0		7	ო			360	22	_	3.6	12.1	845	ຕົ	7				0
Rosa rubiginosa agg.	Rosa	z		_	2	200	۵	Ţ	_	>	0		7	ო			1065	242	ω	3.6	15.2	820	3, 7	7		8	ო	0
Rosa rugosa	Rosa	Ą				150	٥	ፚ	_	>					As2		875	92	7	3.8	15.0	296	'ń	18, 19				0
Rosa sherardii	Rosa	z		L	1	150	d	P	_	٨			7	3			1121	362	0	3.4	14.2	1188	1,:	3, 16	9	9 9	4	0
Rosa stylosa	Rosa	z		c	e.	300	۵		돈	>	0		7	ო			286	22	_	4.3	16.1	847	-	3	Ĺ	8	4	0
Rosa tomentosa	Rosa	z		_	e	300	٥	ፚ	_	>			7	ო			414	8	_	3.7	15.8	842	1,3	3		7	4	0
Rubia peregrina	Rubi	z		ا 0	0.17	8	۵	일	F.	SW.	' Rhiz2		တ	-			240	79	7	5.2	15.7	1031	-		9			0
Rubus arcticus	Rosa	N EX	×	×		30	۵	2	_		Rhiz2		4	ဖ			4	0	0		11.2	1782	9			2	4	0
Rubus caesius	Rosa	z		ا O	-0.34	20	۵		n Pn	>	Тiр		7	4			1339	166	2	3.8	15.6	851	က			2 2	9	0
Rubus chamaemorus	Rosa	z		ا أ	-0.47	20	٥	2		ح			4	ဖ			394	_	0		12.2	1594	10	10, 12		7	_	0
Rubus fruticosus agg.	Rosa	z		ا أ	-0.29	200	۵	돈	_	≥	흐		∞	ო			2564	974	4		14.6	1089	1,3	3	ဖ		ဖ	0
Rubus idaeus	Rosa	z		ا O		150	۵	F.	_	>			2	9			2425	648	7	3.4	14.5	1095	_			5		0
Rubus saxatilis	Rosa	z		n -0.	-0.27	40	ď	hc		ᅩ			2	2			793	132	0	2.4	13.0	1514	1, 7,	7, 16				0
Rubus spectabilis	Rosa	Ą				200	۵	ፚ	_	>					Am4		210	153	0	3.4	13.8	1162	1,3	3	ဖ	9		0
Rumex acetosa	Poly	z		г -		09	۵	2		_	0		Ŋ	4			2790	979	4	3.5	14.4	1105						0
Rumex acetosella	Poly			ا ف	-0.62	30	۵	2			Root		ဖ	4			2743	865	4	3.5	14.4	1110	œ̂	9, 16			က	0
Rumex aquaticus	Poly) N	_	_		180	۵	2	₹ ∵	-	0		Ŋ		O		က	0	0	2.7	13.8	1795	7	11, 13, 14		7		0
Rumex conglomeratus	Poly	z		n 0.		90	۵	hc		ᅩ	0		∞	4			1768	702	12	3.9	15.2	953	11	11, 14				0
Rumex crispus	Poly	z		п		100	۵	2			0		∞	4			2724	928	4	3.6	14.5	1087	ຕ໌	6, 19	œ	2	9	7
Rumex hydrolapathum	Poly	z		ا O		200	۵	<u>ہ</u>	₹ ∵		0		7	က			928	191	9	3.9	15.7	812	11		_		9	0
Rumex longifolius	Poly	z		ا 0		120	۵	PC		ᅩ	0		4	2			290	0	0	2.3	13.0	1174	რ	13		2 9	7	0
Rumex maritimus	Poly	z		٥.	0.42	9	Ø	머	ر ا	ے	0		7	ဖ			398	17	က	3.7	15.9	209	13	13, 14	00	7	7	0
Rumex obtusifolius	Poly	z		<u>с</u>		100	۵	2	_		0		7	ო			2746	973	4	3.6	14.5	1100	'n.	5, 17		2	თ	0
Rumex palustris	Poly	z		٥.		09	۵	PC		ح	0		7	က			235	0	0	3.6	16.2	637	13		7	8 7	ω	0
Rumex pseudoalpinus	Poly	AR		Ϋ́		20	۵	2		ᅩ	0				Enr		184	_	0	2.4	13.7	1052	ຕ໌	17		2 9	თ	0
Rumex pulcher	Poly			п		40	۵	2	_	_	0		∞	က			208	0	4	4.2	16.3	772	ຕ໌	5,6	_	9	_	0
Rumex rupestris	Poly	Z Z	z	s Ō	-0.28	20	۵	2		_	0		7	0			9	0	7	6.1	16.1	1000	Co 18,	, 19	_	വ	2	0

Taxon name	Fam	ď.	Š	ď	Cha	Hobt	len D1	6	<u> </u>	F2	×	Clone1	Chnn	Е1	F2 C	Origin	S.	2		Tian	Ē	Prec	٥	Br Habitate	_	Ω	z	ď.
	Poly			2 =		_	_	-	_					<u></u>	-	5	2026			8	15.0	1003	3	-		_		, 0
	Rupp	z		s	-0.41		d 09		Ť		ㅂ		hiz2	9	9		121	1 22		4.4	15.5	841	රි	21	7 13	2 7		4
	Rupp	z		_	-0.34				主		드	Irreg	Rhiz2	ဖ	9		363		ო	4.3	14.8	1063	ပိ	21	9	8	∞	4
S	≣	z		_	0.74	11	۵		듄		<u>∝</u>	Rhiz1		တ	7		238			4.3	16.4	782		1,3				0
	Cary	z		_	0.25	15	a		드					œ	က		2020			3.7	14.9	989		17		9	က	0
ла	Cary	z		ر د	-0.08	15	а		Тh		о Ч			ω	3		635	_		4.4	14.5	1072	ပိ	18, 19				4
Sagina nivalis	Cary		₹	-		က	٥			-				-	9		4			-0.2	11.4	2256		15	œ	8	_	0
Sagina nodosa	Cary	z		_	-1.14	15	۵			2		0		2	4		1148		9	3.6	14.3	1089		11, 19	∞		က	_
Sagina procumbens	Cary	z		_	1.28	20	٥		ည				Node1	2	4		2788	0,		3.5	14.4	1106		3, 16, 17			2	_
Se	Cary	z		v	-0.77	10	٥		ნ					-	9		22	0		0.2	11.2	1851		7, 15		2	7	0
Sagina subulata	Cary	z		_	-0.44	10	р		ch		р 1			7	3		654			3.7	13.9	1291	~	3, 10			4	0
sagittifolia	Alis			۔ د	-0.44		95 p		Н			Rg		2	4		640		0	3.7	15.8	747	Ì	13, 14	1		9	0
Salicornia	Chen	z		_	-0.82	36	a		드		ە د			ဖ	စ		511			4.3	14.9	1107	ပိ	21			9	œ
Salicornia dolichostachya	Chen	z		_		45	a		드		о ч			2	က		154	1 21		4.3	15.7	854	රි	21		8	9	ი
Salicornia europaea	Chen	z		_		32	a		ᆮ		0 ح			ဖ	9		24			4.5	15.2	1038	გ	21			9	თ
ea agg.	Chen	z		_		88	a		드		o ح			ဖ	9		340			4.5	15.2	1038		21			ဖ	တ
Salicornia fragilis	Chen	z		s		40	В		Т		о Ч			2	-		ര്		l	4.5	15.7	884	රි	21			9	တ
Salicornia nitens	Chen	z		_		22	a		드		о Ч			ω	_		7			4.2	15.7	821	රි	21			9	თ
Salicornia obscura	Chen	z		_		9	a		ᆮ		о ч			7	_		←			4.	16.4	712	රි	21			9	၈
Salicornia procumbens agg.	Chen	z		_		32	a		드		ە د			Ŋ	ო		17.			4.3	15.7	854		21			9	၈
Salicornia pusilla	Chen	z		S	-0.21	25	а		Th		р 1			7	1		ğ			4.6		791	ပိ	21			9	2
Salicornia ramosissima	Chen	z		ے		40	a		Тh		о Ч			8	2		224			4.4		862	ഗ	21		2 8	2	တ
Salix alba	Sali	AR				2500	٥		占					œ	4		1771			3.7		938		14			ω	0
Salix arbuscula	Sali	z		S	-0.12	20	٥		F.		o ≽			-	က		48			0.0		1965		15, 16			7	0
Salix aurita	Sali	z		_		250	٥		- L		o ≽			2	က		2096			3.4		1190		1, 16		4	က	0
Salix caprea	Sali	z		L		1000	р		Ph		۸ 0			2	2		2412			3.4		1080		1			7	0
Salix cinerea	Sali	z		۵		800	d		Ph		0 %			2	4		2590			3.5		1096		1,11		9 8	2	0
Salix fragilis	Sali	AR				1500	٥		돈					7	4		1980	230		3.6		955		1, 14	9	8	^	0
Salix herbacea	Sali			_	-0.33	9	۵		ნ			Rhiz2		-	က		391			2.2		1849		15		ιο O	7	0
Salix lanata	Sali		3	_	0.07	9	۵		듄					-	9		15			ю. О		1723		15			က	0
Salix lapponum	Sali	z		S	-0.73	100	۵							7	4		101			0.2	11.3	1956		15			3	0
Salix myrsinifolia	Sali	z		_	0.93	300	۵			듄				4	4		276	21		<u>6</u>	13.0	1253		13, 14, 16	ဖ	8	4	0
	Sali	z		S	-0.58	4	۵				o ≽			-	က		ř			0.3	11.4	1854		15, 16			7	0
	Sali	z			0.11	200	۵							2	4		700			3.0	14.0	1114					4	0
ā	Sali	z		_	-0.14	400	٥			Æ	o ≽			7	9		456			1.7	12.7	1412		14, 16	_	3	4	0
Salix purpurea	Sali	z		٦	-0.01	300	р			-				7	4		1189	379		3.4		984	•	11, 14		9 7	2	0
Salix repens	Sali	z		_	-0.42	120	۵		됴			Rhiz2		Ŋ	4		1624			3.5		1205		10, 19	ω	9 /	က	0
Salix reticulata	Sali	z		Ø		15	٥		ნ		<u>∝</u> ≥	Rhiz1		-	9		52			٥ -		2081		15, 16		8	က	0
Salix triandra	Sali	AR				1000	٥		듄					7	2		862		4	3.7		813		11, 13, 14	7	8	2	0
Salix viminalis	Sali	AR			0.61	009	۵		듄					7	2		2194		7	3.7	14.8	1030		11, 13, 14	_	9	9	0
Salsola kali	Chen	z		٦	-0.61	20	а		ᄕ		о Ч			8	4		388	7		4.5	14.9	1008	ပိ	19	6	6 7	ω	က
Salvia pratensis	Lami	ΑN		S	-0.75	06	р		hc		о Ч			2	3		36			3.7	16.3	733		3,7		3 8	4	0
	Lami	z		_	-0.51	8	٥		ဍ		о Ч			တ	_		481	1 20		4.1	16.1	748		3,7	00	3 7	7	0
S	Capr	AR				120	۵		ဍ		모	Rhiz2		ω	က		533		7	3.8	15.3	913	Ü	3		2	/	0
	Capr	z		_		1000	۵		듄		o ≽			7	က		2457	7 919		3.6	14.7	1061	Ú	3, 17	9	5	7	0
Sambucus racemosa	Capr	A			0.79	400	<u></u>		占		o ×			2	ပ 9	NHem	360	_		2.3	13.6	1048	`	1,3	9	9	7	0

Samulus valerandi Prim Nova Nova Nova Nova Nova Nova Nova Nova	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	120 120 120 120 130 145 150 160 170 180 180 180 180 180 180 180 180 180 18		2 2 2 2 2 5 2 5 2 5 2 2 2 5 2 5	i i		Rhiz1	0 0 0 1	0 4 0 0		845 1216 946	84	6 2 6	3.7 15.6	-	013	11	8 4 7	<u></u> ω ω ω	, '' , ''
Rosa N R	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0		. 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2222552525252555			Rhiz1		4 0 0		1216	-				44	7		ω (
Rosa N	0.02 0.03 0.03 0.04 0.05			222525252522555			Rhiz1		(0)		946	╙		L		!		L	ú	ر س
Apia N	0.098 0.000 000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.	40 90 90 90 10 10 10 10 10 10 10 10 10 1	000000000000000000000000000000000000000	22525252525			Rhiz1		,)				15.1	938	9		o	2
Cary AR Chen N Saxi N Saxi N Saxi N Cype Cype	0.20 0.20 0.00 0.00 0.00 0.00 0.00 0.00	90 30 30 30 30 30 30 30 30 30 30 30 30 30	000000000000000000000000000000000000000	25252522525							2025	634		3.5 14.7		1090	_		^	2
Chen N	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	30 30 30 30 30 30 30 30 30 30	0 0 0 0 0 0 0 0 0 0 0	5 2 5 2 5 2 2 2 5 5 5			2		3							890	3, 17		9	
Aste N Saxi N VU	15.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	45 20 20 36 30 30 30 30 40 40 40 40 40 40 40 40 40 40 40 40 40	000000000000000000000000000000000000000	25252525				6	1					4.4 16.4		702 Co			8	
Saxi	1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	20 36 30 30 30 30 30 30 30 40 40 40 40 40 40 40 40 40 40 40 40 40	000000000000000000000000000000000000000	5 2 5 2 2 2 5 2 5		n Stol1			2							10	7, 15, 16		9	3 0
Saxi	0.0000000000000000000000000000000000000	15 36 30 30 30 30 30 40 40 40 40 40 40 40 40 40 40 40 40 40	000000000	25222525		h Node2	32	-	9						3 1799	66	7, 11, 15, 16		9	
Saxi	01.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	10 38 30 30 30 30 15 10 10 10 10 10 10 10 10 10 10 10 10 10	0 0 0 0 0 0 0	5222525		h DRa	ORi	-	G					0.5 11.7		92	15, 16		^	
Saxi	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	36 20 20 30 30 15 10 10 10 10 10 10 10 10 10 10 10 10 10	000000	222525		о Ч		-	ഗ		13	0			.7 2003	03	15, 16		_	-
Saxi	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	20 30 15 10 10 10 10 10	00000	2 2 5 2 5		h DRa		7	3					3.1 15.1		853	6,7		9	
Saxi N Sa	1.39 0.0-0-54 0.0-0-65 0.0-0-0-65 0.0-0-0-65 0.0-0-0-65 0.0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0	20 20 10 3 15 20 10 10 10 10 10 10 10 10 10 10 10 10 10	00000	일 등 등 등		h Rhiz1	_		9						1253	23	1		ဖ	
Saxi N Saxi N Saxi N Saxi N Saxi N Saxi N Dips N D Dips N VU r Cype NA	45.0-0.50 0.19 0.19 0.158	20 10 20 20 10 10 10 10 10 10 10 10 10 10 10 10 10	0000	ಕ ೭ ಕ	L	h Stol1		· _	_					5.0 14.6	1334	34	1, 15, 16		2	
Saxi N Saxi N Saxi N Saxi N EW x Cype N VU r Cype NA C	0.50 0.45 0.050 0.19	20 20 20 10 10 10	م م م	운동		h Node2	32	4	_					2.0 12.8	.8 1697	26	7, 15, 16		ဖ	0
Saxi N Saxi N Saxi N Saxi N Saxi N Saxi N Dips N Dips N Apia AR Cype N Cype N Cype NA	0.45	20 20 40 10	۵ ۵			о Ч		-	9					0.6 11.5	.5 2099	66	15, 16		^	
Saxi N EW x Saxi N EW x Saxi N EW x Saxi N Dips N Dips N Cype N C	0.19	10 20 20 20 10	۵			h Node2	32	-	9					1.8 12.1		1980	7, 15, 16		ω	2
Saxi N EW X Saxi N Dips N Dips N N Dips N Cype N Cy	-0.58	20 4 00 10		ဥ		h Rhiz	1 DRa	-	9					0.3 10.8	1941	4	11, 15		Ŋ	7
Saxi N Dips N Dips N Cype N Cype NA Cy	-0.58	04 CD	۵			0		4	2					4.4 14.3	13 1312	12	16		ω	4
Saxi N Saxi N Dips N Apia AR Sche N VU r Cype NA r	-0.58	10 20	۵	2		h Stol1			0					4.7 14.4		1328	16		က	
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Dips N Apia AR Sche N VU r Cype NA r r			Ø	Η		о Ч		80	3					3.9 15.3		921	16		7	
Apia AR Sche N VU r Cype N n	-0.71	92	۵	2		0		7	က			0		3.5 15.6		831	2		ω	
Sche N Cype NA Cype NA	-3.65	20	a	卢		о ч		ω	4			95		3.8 15.7		792	4		_	
Cype N Cype NA r		22	٥	2		h Rhiz2	2	4	ပ 9		14	-				1380	12	<u>ი</u>	ო	-
Cype NA	0.47	210		£		h Rhiz1	_	\vdash	4		1202	535	0		Ľ	1013	13, 14	8 11	_	0
		09	۵	₹		h Rhiz	1		3		0	0		6.1 16.	7	S69		8 10	7	
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Cype N	0.67	150	۵	Ì		h Rhiz1	_		2		702	192		4.2 15.	က	917	11, 13		œ	··
ter Cype N		125	۵	Ŧ		h Rhiz1	_	2	2		∞					799	14	8 10	7	
us Cype N VU r		40	۵	ည		о Ч			က							13	11		_	2
ns Cype N n	-0.53	75	р	hc		h 0			4					3.9 13.9	1	61	11		7	
nalis Lili N s	-0.37	20	۵	පි		otp P		၈	_		64				7	939 Co			9	
L ∏	0.12	10	۵	පි		h Otb	DRg	7	_		310					1103	6, 10		2	
oenus Cype N VU r	0.21	100	۵	ဥ				-	4		ო					ပိ 60			/	
Cype N	0.02	120	۵	ဥ		h Rhiz	_	_	4		871					21	1, 11		9	
Cary N n	-2.68	20	а	Т				7	3		983	69		3.6 15.2		883	4, 8, 10, 16		4	4
is Cary N EN r	-0.11	20	۵					-	က		7					26	8, 16		4	
		20	۵	ဥ		о Ч		_	က							97	9		2	
ta Scro N n	-0.21	120	۵	ဥ		о Ч		_	7							918	11, 14		7	
Scro N n	-0.37	100	۵	h		о Ч		7	4							1069	1,3		7	
AN	0.75	100	р	hc		h 0		8	1 E	Eur				5.8 16.0		1033	3, 16, 18		9	
a Scro N n	0.72	100	d	hc		0 4		. 2	o 4		196	14		3.1 14.9		898	1, 14		2	0 /
Scro AN	0.54	65	q	p hc		о Ч			Ш	Eur				3.3 15.	က	269	1,3	2	7	
culata Lami N n	-0.39	20	٥	ည		h Rhiz	_	ω ,	4		1751			3.6 14.	თ	1055	11		9	2
Lami N n	0.03	20	٥	hc		h Rhiz	_		2		803	136	4	4.1 14	.9 119	91	11	2 9	4	7
Secale cereale Poac AC		150	a	드		о Ч			Ш	Eur	134	7	0	4.0 15	8	25	3, 4	8	7	

Taxon name	Fam	NS	CS	RS	Chg H	Hght Len	P1	P2 LF1	LF2 \	W Clone1	le1 Clone2	E1	E2 C	Origin	GB	≅	드 그	Jan	Tjul	Prec	ပိ	Br Habitats	_	R R	z	S
Sedum acre	Cras	z		٦		10	d			h Node2	s2 Irreg	7	၁		2108	504	12		14.9	995	_	9	ω	2	2	_
Sedum album	Cras	Ä			2.41	20	۵			h Node2			7		1603	217	13	3.8	15.1	948	(,)	3, 16, 17	ω	e	2	0
Sedum anglicum	Cras	z		۲	1.21	2	۵	5		h Node2		_	_		886	393	4		14.3	1321		16, 18	∞	ر س	2	_
Sedum forsterianum	Cras	z		s	1.54	20	۵	ర్		h Node2		ω	_		122	0	0	3.6	14.8	1239	(,)	3, 16	_	8	5	0
Sedum rosea	Cras	z		ب د	-0.41	32	۵	ည		о ч		_	9		524	82	0		12.6	1728	_	15, 16	7		9	0
Sedum rupestre	Cras	AN		. 4	2.20	30	d	ပ်		h Node2	s2 Irreg			Eur	1212	70	4	3.7	15.5	905	(•)	3, 16	2	2	5 4	0
Sedum telephium	Cras	z		ب د	.34	09	۵	ည		о ч		7	2		1197	0	0		15.0	1032	_	1, 3, 16	7		5	_
Sedum villosum	Cras	z		ပ ဇ	92'(10	۵	ర్		о ч			က		211	0	0		12.9	1273	_	11	ω	6		0
noides	Sela	z		<u>د</u>	-0.47	တ	۵	ర్		h Node1	76	4	9		988	288	0		13.0	1443	_	7, 11	ω		6	0
Selinum carvifolia	Apia	z	2	_		100	۵	ဥ		о ч			ო		3	0	0		16.1	262		11	_	~	4	0
Sempervivum tectorum	Cras	A				40	d	5		h Stol1				Eur	200	42	2		15.3	871	(,)	3, 17	ω		1	0
Senecio aquaticus	Aste	z		ر م	3.92	80	a	و ع		о ч		7	က		2304	919	_		14.5	1109		1,14	_		9	0
Senecio cambrensis	Aste	뮏		_		30	۵	ဥ		о ч		7	_		4	0	0	3.6	15.0	804	(*)	3, 17	ω	2	7	0
Senecio cineraria	Aste	¥		.,		09	۵	ర్	Ph	o ws		0	_ ღ	Eur	256	ω	Ŋ		15.9	837	(,)	3, 17, 18, 19	တ	m	8	ო
Senecio erucifolius	Aste	z		2		120	۵	2		h Rhiz1			4		1276	၉	0		15.8	783	(-)	3,6	_	5	5	0
	Aste	Ν			0.03	150	d	h		h Rhiz2	5	7	4	Eur, As1	184	22	0		14.6	1018	_	1, 11, 13, 14	7	8	2 9	0
Senecio jacobaea	Aste	z		ے		125		ь Б		о ч	Root	7	4		2725	982	4		14.5	1102	(-)	3, 6, 7, 8	7	4	4	0
Senecio paludosus	Aste	z	S	_		175	۵	2		о ч		7	ο		7	0	0		16.2	573		11, 13	_	0	9	0
Senecio smithii	Aste	Ą				100	۵	ဥ		о ч			Ĺ	SAm	62	0	0		12.3	1072	(,)	3, 6	ω	6	2	0
Senecio squalidus	Aste	Ą		J	0.77	20	a	P Th	占	о ч				Gard	1494	75	4		15.5	820	(,	3, 17	ω	4	7 7	0
Senecio sylvaticus	Aste	z		u u	60.0	20	а	卢		0 4		7	3		1853	238	12		14.9	286	(1	6,8,9	7		5	0
Senecio viscosus	Aste	Ą		J	0.63	09	a	ᆮ		о ч		7	<u>-</u>	Eur	1747	6	_		15.1	920	(,)	3, 17, 19	ω			_
Senecio vulgaris	Aste	z		۲ د	-1.08	37	a	ᆮ		о ч			ო		2630	942	4		14.6	1075	(,)	3, 4, 17	_	ני	7 7	0
Serapias parviflora	Orch	¥		_		30	۵	-B		о Ч		თ	_		_	0	0		16.2	1048	•	6	ω		7	0
unu	Aste	z		٦	-0.42	20	۵	ర్	2	h Rhiz2	2	7	7		222	20	~		15.8	783	ပိ	7.	တ	~	8	Ŋ
Serratula tinctoria	Aste	z		ٻ u	-0.21	20	d	ધ		0 4		7	ဗ		942	0	2		15.5	965			7	9	6 2	0
Seseli libanotis	Apia	z	3	_		09	q	ည		о ч		7	2 2		4	0	0		16.4	645			7	4		0
Sesleria caerulea	Poac	z		၇	-0.09	45	۵	ည	П			Ω 			9/	8	0	3.1	13.9	1262	_	7, 16	7	9	8	0
Setaria viridis	Poac	Ϋ́		_	0.80	20	a	卢		0 4				Unk	431	27	2		15.9	798	(,	3, 4, 17	7	4		0
Sherardia arvensis	Rubi	z		u -		40	а	Тh		р 0		8	3		1635	369	12		15.2	916		, 16	7	4	6 4	0
Sibbaldia procumbens	Rosa	z)- s		2	d	hc				1	9		133	0	0		11.3	2109	1	15	8	2		0
ораеа	Scro	z		ဂ ဇ		2	۵	ర్			55	7	_		107	တ	ω	5.3	15.5	1189	(,)	3, 14	Ŋ		5	0
	Apia	z		ب د		100	۵	ဥ				7	4		963	0	0		15.8	743	w	6	ω	2	4	0
•	Cary	z		ب د	-0.47	10	۵			0 4		_	က		236	တ	0		11.8	1937		, 15, 16	ω	2	9	0
,	Cary	z		s -1	-1.05	35	а	Τh		h 0		_	4		29	0	10		16.0	702	w	3, 19	8	3 ~	4 2	0
	Cary	z		ب ا	-0.44	06	d	hc	Ch	0 H		2	3		2514	263	14	3.4	14.6	1065	1		2	9		0
	Cary	AR		',7		45	а	ᆮ		о ч		-	7		455	3	7		15.7	877	(,)	3, 4	7	4	5	0
	Cary	AR		<u>ٻ</u>		100	ď	hc		о Ч		ω	4		1954	211	13		15.1	911	(,		7	4		0
ra	Cary	AR		'-	-2.04	20	a	ᆮ		о ч		7	က		989	22	-	3.7	15.8	736	7	_	7	4		0
Silene nutans	Cary	z		ب د	-0.39	80	۵	ည		о ч		7	4		25	0	9		15.7	883	_	9	∞	8	8	0
	Cary	z		r -c	-0.36	80	d	hc		0 H		_	3 c		18	0	0	3.2	16.1	625	(,)	3,8	8	3		0
	Cary	z		ب د	-0.39	28	۵	ည		о ч		H	2		943	236	13		14.1	1263	ပိ	8	ω	9		ო
	Cary	z		- -	-1.26	80	Q	hc		0 4		00	2		1710	280	œ	3.7	15.3	897	(,)	3,6	7	4	8	0
	Aste	Ä		۲	-0.07	100	а	a hc	드	о ч				Eur	222	9	9	0	15.8	781	(1)	_	ω	4	8	_
Simethis planifolia	ij	z		0		42	۵	Gn		о Ч		ω	2		0	4	0		15.1	1324		10	7	2	3	0
Sinapis alba	Bras	AR		<u>۲</u>	06.0-	06	а	౬		о Ч	_	80	က		1082	162	9	8.	15.5	832	()	3, 4	7	4	9	0

Tayon name	Бап	ď	ď	Sa	H PHO	Hoht len	2	9	F1 F2	W C	Clone	Cono	F1 F2	Ċ	Origin	a.	<u>~</u>	i	Tian		Drac Co	a Br Hahitate	ц.	Ω	o.	
Sinapis arvensis	Bras			_	_		a	ΙE	. —	-	0		_	_	5	2373	7	-		_	~	(,)			0 2	
Sison amomum	Apia	z				100	۵	2		ح	0		9			790	0			16.2	756	m		_	5	
Sisymbrium altissimum	Bras	Ą		Ľ	-0.84	100	a	卢	-	ح	0		-	Eur	=	614	59	က	3.7 15		771	3, 17	8	ဖ	0	
Sisymbrium officinale	Bras	ΑR		_	-0.21	92	a	d T	2		0		က ထ			2117	775			15.0	973	3, 4, 17		^	7 0	
Sisymbrium orientale	Bras	AN		1	-0.24	80	В	Τ	H	ч	0			Eur	٦r	864	22	10			815	3, 17	7 4		5 0	
Sisyrinchium bermudiana	lrid	z		0		23	۵	2	_	ᆮ	0		0			0	43				1290	6, 13		ဖ	0	
Sium latifolium	Apia	z		S		200	۵	Î	J	ᆮ	0		-			259	8				702	11, 14	•		7 0	
Smyrnium olusatrum	Apia	ΑR				150	۵	2		ᅩ	0			Eur	ı	803	327			15.5	206	3	7 5	_	7 0	
Solanum dulcamara	Sola	z		L	-0.11	225	d	Pn	ر د	SW	Node2		8 5			1918	533				945	3, 11, 14			7 0	
Solanum nigrum	Sola	ΑN		L	0.44	09	В	Th		ч	0		8 2			1258	0		3.9 1		608	4	2 2		8	
Solanum sarachoides	Sola	Ą				09	a	두	_	ح	0			S/S	SAm		0				969	4, 17	7 4		7 0	
Solanum tuberosum	Sola	Ą				100	۵	Б	_	ح	Rhiz1			S/S	SAm		29				883	4	7 4		7 0	
Soleirolia soleirolii	ĘŦ	¥			2.36	9	۵	ర్	_	ح	Node2		0	Eur	¥		130			15.7	906	3, 17			0 9	
Solidago canadensis	Aste	Ą				200	۵	2		ح	Rhiz1			Am	٦		24	വ			833	3, 17		9	0	
Solidago gigantea	Aste	AN				200	d	hc		ч	Rhiz1			Am	r		_		3.5 15		854	3, 17			0 9	
Solidago virgaurea	Aste	z		ī _	-0.89	20	۵	2		ح	0		2			2043	492				1217	10, 16	2		0	
Sonchus arvensis	Aste	z		ī _	-0.12	150	۵	2		ح	Rhiz2		7 4				908			14.8 1	1013	4			9	
Sonchus asper	Aste	z		_	0.78	150	a	드	_	ح	0		რ დ			2584	961			14.6	1070	9, 4			0 9	
Sonchus oleraceus	Aste	z		آ د	-0.42	150	Ø	드	_	ح	0		က ထ							14.8	1031			_	7 0	
Sonchus palustris	Aste	z		s	0.18	250	۵	h		ح	0		7 4								615	11	7 8		7 1	
Sorbus anglica	Rosa	뮏	3	_		200	۵	Ł	_	>	0		7			1			3.8	15.2	1082	1, 16			0	
Sorbus aria	Rosa	z		_		1500	٥	ቷ	_	>	0		7								774	_				
Sorbus aria agg.	Rosa	z		_	0.82	1000	۵	舌	_	>	0		7						3.8	16.3	780	17	9			
Sorbus arranensis	Rosa	뮏	3	_		750	۵	舌	_	>	0		4			_	0			12.1	1530	16		4	3	
Sorbus aucuparia	Rosa	z		_	0.86	1500	۵	Æ	<u> </u>	>	0		2			2472	749		3.4	14.4	1128	1, 2, 16				
Sorbus bristoliensis	Rosa	뮏	Z	_		1000	٥	壬	_	>	0		7			_	0		4.4	16.5	844	1, 16			0	
Sorbus devoniensis	Rosa	뮏		v		1500	۵	舌	_	>	0		7			32	1	0			1171	1,3	6	9	5	
Sorbus domestica	Rosa	z	兴	-		200	۵	둡	L	>	Root		რ დ			4	0		4.5 16		857	16			3	
Sorbus eminens	Rosa	뷜	3	_		009	۵	壬	_	>	0		7 1			ω	0				878	_			5	
Sorbus hibernica	Rosa	ŊĘ		0		009	d	P	L	٨	0		7 1			0	63		4.5 14		1035	1, 3, 16		2	5 0	
Sorbus intermedia	Rosa	Ą			_	1000	۵	풉	_	>	0			Eur	1	989	17				901	1, 3, 17	9	ω	7 0	
Sorbus lancastriensis	Rosa			_		200	۵	둡		≥	0		7 1			თ	0				1285	16			3	
Sorbus leptophylla	Rosa	뷛	兴	_		300	۵	ď	둡	≥	0		7 1			က	0				1501	16			5	
Sorbus leyana	Rosa	ŊĘ	CR	٦		200	۵	Pn		>	0		7 1			2	0				1687	16			4 0	
Sorbus minima	Rosa	빌	3	_		300	۵	ď	둡	≥	0		7 1			_	0	0			1523	16	9	ω	0	
Sorbus porrigentiformis	Rosa			S		200	۵	둡	_	≥	0		7 1			၉	0				1273	16		7	5	
Sorbus pseudofennica	Rosa	H H	7	_		200	۵	亡	_	≥	0		4			_	0				1530	16	7	4	3	
Sorbus rupicola	Rosa	z		S		200	۵	ď	_	>	0		2			86	13				1405	16	8	7	3 0	
Sorbus subcuneata	Rosa	NE \	VU	r		1000	р	Ph	_	>	0		7 1			4	0				1380	1		4	4 0	
Sorbus torminalis	Rosa	z		_ _	0.22	1900	۵	Ph		>	Root		7 3			223	0				804	1	4 5	9	5	
Sorbus vexans	Rosa		₹	_		009	۵	立	_	>	0		7 1			4	0		4.2		1409	1, 16		4	0	
Sorbus wilmottiana	Rosa	뮏	SR	_		009	٥	풉	_	>	0		7			_	0		4.4	16.5	844	1, 16	6	œ	3 0	
Sparganium angustifolium	Spar	z		_	1.66	100	d C	ī	Ļ	ᆮ	Rhiz2		4 ع			652	207		3.0 12		1571	13	8 11	4	2 0	
Sparganium emersum	Spar	z		u		9	d C	H	,	ᅩ	Rhiz2		5 6			1426	393	1	3.6 15	15.0	982	13, 14	7 11	7	6 0	
Sparganium erectum	Spar	z		_		150	۵	Î	_	ᆮ	Rhiz2		9 /			2129	99/	80	3.7 14		1000	11, 13	7 10	7	7 0	
Sparganium natans	Spar	z		٦ د	-0.13	20	a C	Î		ح	Rhiz2		2			208	267	0	3.3	13.8	1303	13	7 11	9	0	

Taxon name	Fam	NS	CS	RS	Cha H	Haht Len	en P1	P2 LF1	=1 LF2 \	W Clone1	1 Clone2	E1 E2	2 C	Origin	GB	<u>∝</u>	2	Tian	Tinl	Prec	ပိ	Br Habitats	_	Я	Z	S
Spartina alterniflora	Poac	Ą		_		110	_	12		h Rhiz2		-	_) 	12	0	0	L	15.7	_	(1		တ		8	7
Spartina anglica	Poac	뮏		ے	0.11	130	۵	2		h Rhiz2					251	7	-	4.6	15.7		Co 21	_	တ	<u>ი</u>	8	
Spartina maritima	Poac	z		ς s	-0.55	20	۵	2		h Rhiz2		8			22	0	0	4.1	16.6	625	C0	_	တ			ø
Spergula arvensis	Cary	z		0	-2.30	30	В	ഥ		0 4		6			0	0	6		16.7	811	4	4	7		5	0
Spergularia bocconei	Cary	¥		<u>۲</u>	-0.22	10	Ø	ᆮ		о Ч		0	Eur	<u>_</u>	18	0	თ		16.3	901		6, 17, 19	တ			
Spergularia marina	Cary	z		_	1.83	10	Ø	ᆮ		о Ч		8			089	185	∞		14.6		ပိ	3, 21	œ	00	8	2
Spergularia media	Cary	z		ب ء	-0.24	12	۵	ნ		0		-			629	186	0		14.6	1125	ပိ	_	œ			
Spergularia rubra	Cary	z		ے	0.05	15	Ø	ᆮ		о Ч					1363	99	13		14.9	983	ω΄	, 17	œ			
Spergularia rupicola	Cary	z		ء	0.30	10	۵	ნ		о Ч					239	169	13		12.1	1105	ပိ	8	တ			ო
Spiranthes aestivalis	Orch	z	ŭ	×		40	۵	2		о Ч		7	er.		_	0	7		16.5	822	_	11	တ		80	0
Spiranthes romanzoffiana	Orch	z			0.45	25	۵	2		о ч					21	4	0		14.1	1248	_	_	∞			0
Spiranthes spiralis	Orch	z		ء	-0.95	15	۵	2		о Ч			ar.		655	117	13		15.9	884	7	7	∞	4		
Spirodela polyrhiza	Lemn	z		ء	-0.18		0.8 p	£		h Frag			65		535	66	7	3.9	15.9	768	_	3	7 1	-		_
Stachys alpina	Lami	AN				100	۵	2		р О Ч		7 3	Eur	_	က	0	0		14.7	1007	1	ε,	7		3 7	0
Stachys arvensis	Lami	AR		ì	-1.17	25	a	ᆮ		о Ч		8			1418	206	13	4.0	15.3	964	က	3, 4	∞	5	5	0
Stachys germanica	Lami		N N	<u>ب</u>	-0.27	80	٥	2		о ч		7	-		10	0	0		16.1	661	က		7			0
Stachys officinalis	Lami	z		ء	-0.62	09	۵	2		о ч		7			1571	38	4		15.4	940	Ó	7,7	7		ιO C	0
Stachys palustris	Lami	z		ے	0.01	100	۵	Б		h Rhiz2		2			2346	919	တ		14.6	1079	_	11, 14	_			0
Stachys palustris x sylvatica	ime	Į		2		100	2	Š		h Rhizo					1020	117	4	ر بر	14.7	1086	. "	14	7	9	· ·	
Stachys sylvatica	Lami	z			-0.49	100	۵ ۵	2 2				7			2462	908	. 51	. o	14.7	1064	ົຕ	_		9	8	0
Stellaria graminea	Carv	z		+	-0.02	80	. 0	2				7			2446	852	ω	Ŋ	14.6	1065	9		_		Ι.	0
Stellaria holostea	Carv	z		+	-0.56	09	. 0			h Rhiz1	Node1	7			2372	671	7	Ŋ	14.7	1058	_		Ŋ			
Stellaria media	Cary	z	Γ			20	. ത	౬			Node1	9			2749	962	4		14.5	1095	n	4	7			0
Stellaria media agg.	Cary	z		-	0.03	20	a	上		0 4	Node1	9			2749	962	14	3.6	14.5	1095	က	3,4	7	2	5	
	Cary	z		ء	0.42	80	a	౬		о Ч	Node1	7	ar.		775	4	0		15.6	911	_	e,	ဖ			0
Stellaria nemorum	Cary	z		_	0.21	09	۵	2		h Rhiz1		5			432	0	0		14.2	1027	7	1, 14	4	9		0
Stellaria pallida	Cary	z			1.17	20	a	드			Node1	8			293	27	13		15.8	296	က	3, 19	7	4		
Stellaria palustris	Cary	z		u u	-0.89	9	d	hc		h Rhiz1	Node1	_			389	73	1		15.5	793	1	1	7			
Stellaria uliginosa	Cary	Z) u	-0.10	40	d	μc		h Rhiz1		€ 2			2570	86/	6		14.4	1128	1	11, 14	2	8	5 5	0
Stratiotes aloides	Hydr	¥		_	1.65		50 p	Η		h Stol1	DRa	5	υ -		92	0	0		16.1	596	_	13	7 1		9 /	_
Suaeda maritima	Chen	z		٦	-0.47	30	В	ᆮ		о Ч		8			525	141	9		14.9		Co 21		တ	ω		
Suaeda vera	Chen	z		ς o	-0.11	120	۵	ፎ		o ≽		-			47	0	_		16.4		ပိ	19, 21	တ	·	ω ω	Ŋ
Subularia aquatica	Bras	z		u U	0.73		6 a	Hz		h 0		4			324	33	0		12.6	1789	1	3	7 1	1		0
Succisa pratensis	Dips	N)- u	-0.57	100	d	hc		0 H	Rhiz1	7 4			2633	934	2	3.5	14.4	1124	9		2	1 2	2	0
Symphoricarpos albus	Capr	Ą			1.74	200	۵	ቼ		w Rhiz2			Am	٦	2067	744	4		14.9	992	_	, 3, 17	Ŋ			0
Symphytum asperum x officinale (S. x uplandicum)	Bora	Ą				135	٥	온		0			Ш	=	1924	399	ω		15.0	952	ო		9			0
Symphytum officinale	Bora	z		ء	0.34	135	۵	2		о Ч		7 3			1263	189	9		15.4	871	7	_	_		8	0
Symphytum orientale	Bora	AN			1.83	20	d	hc		р 0			Eur	ı	442	2	3		16.0	719	3		9	4	7 6	0
Symphytum tuberosum	Bora	z		u	0.11	22	d	ρ		0 H		8 2			407	0	0		13.5	1047	1,	, ع	9			
Syringa vulgaris	Olea	¥		Ì	4.48	700	۵	둔		w Rhiz1			Eur	<u>_</u>	1296	163	4		15.3	881	က	, 17	ဖ			0
Tamus communis	Dios	z		٦	-0.41	400	۵	Б		о Ч		9			1421	0	4	3.8	15.7	820	<u>,</u>	ε,	ဖ	D.	2	0
Tanacetum parthenium	Aste	A			0.23	24	۵		2				Εď	_	2126	413	7		14.9	980	ĸ,	, 17	7			0
Tanacetum vulgare	Aste	z			-0.23	120	۵	얼		h Rhiz1		-			2004	0	9		15.0	928	က		7	9		0
Taraxacum	Aste	z		_	0.43	30	۵	ဍ		0 L		9			2778	974	4	3.5	14.5	1104	m ⁻	, 5, 17	_	2	9 2	_

Taxon name	Fam	NS	CS	RS C	Chg	Hght Len	n P1	P2 LF	F1 LF2	2 V	Clone 1	Clone2	E1 E2	2 C	Origin	GB	≅	ᄗ	Tjan	ΙΞ	Prec Co	o Br Habitats	<u>Т</u>	œ	z	S
Taxus baccata	Таха	z		0		2000	٥	à	_	>	0		7	_		1881	260	7	3.5	12.1	926	_		4 7	2	0
Teesdalia nudicaulis	Bras	z		<u>ہ</u>	-0.81	15	Ø	È	_	ح	0		7	~		209	7		3.4	15.0	949	80	œ	3	7	0
Tellima grandiflora	Saxi	Ą				70	٥	2			0			Ė	Am4	308	20	7	3.6	15.2	974	1, 3, 17		9	4	0
Tephroseris integrifolia	Aste	z		o- s	-0.79	09	q	hc			0		H	၁		66	0		3.7	16.1	774	7			3	0
Tephroseris palustris	Aste		EX	×		100	۵	p hc		ᅩ	0		-			26	0		3.6	16.1	617	13			9	0
Teucrium botrys	Lami	Ą		P	-0.42	30	a	Ė		ح	0		7 3	ပ	Eur	12	0		3.6	16.3	292	3, 4, 7, 16			7	0
Teucrium chamaedrys	Lami	z		ٻ	-0.41	22	٥	ਠੋ	_				-	ပ	Eur	72	7		4.2	15.7	826	3, 7, 16			_	0
Teucrium scordium	Lami	> z		<u>-</u>	-0.64	22	۵	မ		ᅩ	Rhiz2			_		24	12		4.0	15.8	740	11, 13, 14			4	_
Teucrium scorodonia	Lami	z		우 드	69.0-	20	٥	2	_	ح	Rhiz2		-	•		2322	588			14.5	1150	1, 9, 16			က	0
Thalictrum alpinum	Rann	z		<u>ہ</u>	-0.34	15	۵	hc			Rhiz2					409	23		2.0	12.1	1845	7, 11, 15, 16			က	0
Thalictrum flavum	Rann	z		우 드	-0.53	100	٥	2	4.		0					699	9			15.8	762	11			Ŋ	0
Thalictrum minus	Rann	z		0	0.56	20	٥	2	4.		Rhiz2		5	10		504	8			14.0	1185	16, 19		9	ო	0
Thelypteris palustris	Thel	z		ဂ	-0.35	100	٥	Ō	_		Rhiz2			(0		171	54			15.5	869	1, 11			Ŋ	0
Thesium humifusum	Sant	z		၀	-0.21	20	٥	ਹ	_	ح	0					145	0			16.2	762	7			ო	0
Thlaspi arvense	Bras	AR		0	0.16	20	В	上	_	Ч	0		7 5			1600	143			15.3	828	3, 4			9	0
Thlaspi caerulescens	Bras	z		0 s	0.01	40	٥		_	ح	0		4	~		2	0			13.5	1314	16			-	0
Thlaspi perfoliatum	Bras	> z	2	<u>-</u>	-0.94	17	a	广	_	ح	0		Н	_		0	0		3.3	16.0	732	3, 16			7	0
Thuja plicata	Cupr	Ą			4	4200	٥	돈	_	≥	0			Ė	Am4	574	7		3.6	15.4	977	2, 17			4	0
Thymus polytrichus	Lami	z		우 드	-0.64	7	٥	Ö	_	SW	Node2		-	~		2246	486	_	3.4	14.2	1175	7, 16			7	0
Thymus pulegioides	Lami	z		o u	-0.38	22	d	Ö	_	SW	Node2		_	~		455	3		3.7	16.1	752	7	8		2	0
Thymus serpyllum	Lami	z		우 -	-0.11	4	٥		_	S	Node2		2	ပ		0	0	0	3.3	16.2	909	80		2	7	0
Tilia cordata	⊭	z		_	1.64	2500	٥	屳	_	>	0		H			896	20		3.5	15.5	873	_	2		2	0
Tilia cordata x platyphyllos (T.																										
x europaea)	Ē	돌		0	0.33	2500	٥	立		≥	0					2	0	0	2.4	14.4	1064	-		9	9	0
Tilia platyphyllos	≡	z		s 2		3000	۵	₫		>	0		7 3	_		84	0		3.3	15.6	816	1			9	0
Tofieldia pusilla	≣	z		우 ㄷ	-0.32	20	٥	2		ᆮ	Rhiz1		7	"		156	0		9.0	11.6	1964	7, 11			7	0
Tolmiea menziesii	Saxi	Ą				20	٥	2		ᆮ	0				Am4	267	7		3.2	14.3	1131	-			7	0
Tordylium maximum	Apia	Ą				100	a	≐		ᆮ	0				Eur	1	_		4.0	16.3	739	9			Ŋ	0
Torilis arvensis	Apia	AR		-5	-2.56	20	a	Ė	_		0		Н	_		389			3.7	16.2	707	4			4	0
Torilis japonica	Apia	z		0- u	-0.48	110	а	İ		Ч	0		H			2178				14.9	1004	3			7	0
Torilis nodosa	Apia	z		o u	-0.36	20	Ø	Ē		ᅩ	0		9			208	22	6	4.1	15.9	792	3, 6	80	2 2	9	_
Tragopogon pratensis	Aste			우 드	-0.30	75	۵	2		ح	0					1749				15.3	871	9			D.	0
Trichomanes speciosum	Hyme		7	-	2.23	32	۵		ے	ح	Rhiz1	ОRр	-			162				14.2	1390	16			ო	0
Trichophorum alpinum	Cype	ш Z	ă			30	۵	2		ح	Rhiz1		4	ပ		_				14.0	828	12			7	0
Trichophorum cespitosum	Cype	z		٥ د	-0.31	35	٥	hc		ح	0gr			<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>		1553				13.7	1312	10, 12			_	0
Trientalis europaea	Prim	z		\rightarrow	-0.27	20	٥	ဇ်	_	ے	Rhiz2	DRg	4	·C		514			6. 6.	12.6	1277	1, 2, 10			ო	0
Trifolium arvense	Faba	z			-0.01	20	a	Ė		_	0		-			1205			დ. დ.	15.5	841	œ			7	_
Trifolium bocconei	Faba	z	2	_		20	a	Ė		ح	0		0			က			6.5	16.2	867	16			7	0
Trifolium campestre	Faba	z		우 드	-0.45	20	a	Ė		ح	0			_		1996	38		3.7	12.1	939	3, 16, 19			4	0
Trifolium dubium	Faba	z		٥ د	-0.11	15	a	Ė			0		7 3	_		2548	942		3.6	14.6	1072	9			2	0
Trifolium fragiferum	Faba	z		우 드	-0.81	10	۵	2			Node2		8 4	_		753	45		4.0	16.0	764	9			9	7
Trifolium glomeratum	Faba	z		ဂ ဖ	-0.11	10	a	亡			0		0			148	Ŋ		4.6	16.3	767	80			7	0
Trifolium hybridum	Faba	Ą		P	-0.48	09	٥	h		ᅩ	0				Eur	1940	214	7	3.5	15.0	943	3, 5		5 7	9	0
Trifolium incarnatum	Faba	> z	3	<u>-</u>	-1.76	20	a	Ė		ح	0		0			က	0	4	6.4	16.4	883	3, 18			7	_
Trifolium incarnatum	E 4 c	Z				,	•	È		٠	c				2	196		ľ	, ,	4	780	ď		ď	Ų	-
Subspinicanian	2	Ž				3	5			=	2				200	2	-	ז	2	<u>-</u>	3	2	-	•	ז	2

Taxon name	Fam	NS	CS	RS Chg	Hght Len	Len P1	1 P2 LF	F1 LF2	-2 W	Clone 1	Clone2	E1 E2 (C Origin	GB	<u>∝</u>	<u></u>	Tjan T	Tjul F	Prec	CoBr	· Habitats	<u>Н</u>	œ	z	S
Trifolium incarnatum subsp.molinerii	Faba	N N		-	20	a	턴		ے	0		1		3	0	4		16.4	883	Co 18				2	_
ш	Faba	z		n -0.5	3 45			0	ح	0		4		2050	208	7	3.4	œ				7	9	4	0
um	Faba	z		n 0.62			드	ے	_	0				606	25	13		15.9	848	ω,				2	0
	Faba	z		s		<u>о</u>		د د	Н	Node2		0 2		21	ത		6.3	15.9	940	Co 18				7	က
	Faba	Z		s -0.84		<u>Б</u>		0	Ч	0				127	0			16.3	595	3, 6	9			2	0
Trifolium ornithopodioides	Faba	z		n 0.42	2 12			_	4	0		_		281	18				874	00				3	0
Trifolium pratense	Faba	z		n -0.18		<u>م</u>			Н	0		Н		2745	926				1100	6, 7	_			2	0
	Faba	z		n 1.31				ပ ပ	H	Node2		-		2798					1105	9				9	0
Trifolium scabrum	Faba	z		n -0.39				ے	ے	0				390	12			15.9	831	∞				7	_
Trifolium squamosum	Faba	z		s -0.32	2 40	a		ے	ح	0				116				16.5		Co 6, 1	19			ဖ	က
Trifolium striatum	Faba	z		n -0.11		a a		٦	ح	0				848				15.7	802	∞				7	0
Trifolium strictum	Faba	≥ ×		_	15	a		ے	ے	0		9		4		7	5.8	15.9	874	16				7	0
Trifolium subterraneum	Faba	z		n -0.10		a	卢	ے	_	0				337				16.2	802		9			7	0
Trifolium suffocatum	Faba	z		s 0.14		a	卢	ے	ے	0				96				16.4	774	œ				7	0
Triglochin maritimum	Junc	z		n -0.44				0	ح	Rhiz1		9		837					1181	Co 21				2	4
	Junc	z		n -0.22			hc	0	_	Rhiz2		-		2196	714			14.2	1145	11				7	7
Trinia glauca	Apia	z	H	r 0.12		٥	2	0	ح	0				9				16.4	889	7				-	0
mnm inodorum	Aste	AR			9	a		ے	ے	0				2119	424	12	3.6	14.9	296	4,		8	ဖ	ဖ	0
4	Aste	z			9		ਹੋ	2	<u></u>	0		<u>ဗ</u>		757	273	က		14.5	1132	Co 18, 19	19			ဖ	_
spermum maritimum																									
	Aste	z	\dashv				۵	n hc		0		3 6		757	273	က	4	2	1132		17, 18, 19	8	9	9	_
ns.	Poac	z		n -0.13		<u>م</u>		0	_	0		7 3		1734	367	ဖ		15.2	006	6, 7				4	0
	Poac	AC				а		ے	ح	0			Crop	741	29	4			861	α, 4	-	8		7	0
Trollius europaeus	Rann	z		n -0.73		<u>о</u>			ᅩ	0		4		826	∞	0			1517	11,	16			4	0
l/a	Pina	-			4600	٥		ے	≥	0			Am4	298	12	0			1102	1, 2,	2, 17			က	0
Tuberaria guttata	Cist	N V	\exists	_				_	4	0		1		2		4			1069	10				_	0
	Aste	z		n -0.65		٥		_	ے	Rhiz2		5		2618		7		14.5	1085	16				9	0
folia	Typh	z		n 0.35				>	_	Rhiz2				2776		ဖ		15.8	775	7				^	_
	Typh	z		n 1.01			Ì	>	ے	Rhiz2		9		1860	682	თ	, 8.6		928	7		8 10	_	^	0
paeus	Faba	z		n -0.34		٥		_	≥	0				2518		4			1090	9				က	0
Ulex gallii	Faba	z		n 0.20		о О		_	>	0		7 1		918		7			1099	10				7	0
	Faba	z		n 0.20		٥		_	≥	0		~		197	0	4		16.4	745	9			_	7	0
	Ulma	z		n -0.28		٥		_	≥	0		7 3		2338	809	0			1056	-				9	0
,	Ulma	z		n 0.75		٥		ے	≥	Root		-		641	0	တ		16.1	764	1,3	•			7	0
	Ulma	빌		s	2000	٥		_	≥	Root		-		128	0	0		16.0	299	က				/	0
Ulmus procera	Ulma	NA		n -0.48	8 3300	р (_	>	Root		7 3		1317	0	0		15.8	819	ဂ				9	0
pestris	Cras	z		n -0.12		9 9		0	ح			1		784	658	14	4.3	6	1125	3, 1	16			4	0
Urtica dioica	Urti	z		n 0.28	_	<u>о</u>			ᅩ	Rhiz2	Stol2	5 4		2773	983	13		2	1102		14, 17			œ	0
Urtica urens	Urti	AR		-0.70	0 60) a	드	_	ᆮ	0		8		1924	283	4	3.7	15.0	914	4, 1		8		œ	0
Utricularia australis	Lent	z		S		9 09	Í.	>	_	DRa		2		162	28	0		15.0	1120	13		_		က	0
Utricularia intermedia																	_	_							
sens.lat.	Lent	z		n 0.40		20 p	f	>	ح	DRa		9		412	156	0	3.1	13.2	1545	1,	12, 13	8 12	4	7	0
ia intermedia	ţ <u>.</u>	z								200		,								7			7	c	-
1 Heion Porio minor	ָבָּרְ בַּרְבָּרָרָ	2 2	+	- 2	r	0 6 0 6	Ì	\ :	2 =	ב ב ב ב ב ב ב ב ב ב ב ב ב ב ב ב ב ב ב		- U		000	277	-	0	0	1001	5 2		0 0		1 C	0
	בנונ	_ Z	1	\dashv	5	оф С		_	=	באם	1	-		220	110	=	O.	מ	1361	-	7	_		1	2

Taxon name	Fam	NS	CS	RS Chg	Hght	Len P1	P2 L	F1 LF2	≥	Clone1	Clone2	딘	E2 C	Origin	GB	<u>≃</u>	ᄗ	Tjan T	Tjul	Prec (Co Br Ha	Br Habitats	ш.	Z	S
Utricularia ochroleuca	Lent	z		_	_		Ī	_	_	DRa		٥.	۰.					_	_		11, 13		8 12	က	0
Utricularia stygia	Lent	z		-			I	>	_	DRa		٥.	٥.								11, 13		8 12	2	0
Utricularia vulgaris sens.lat.	Lent	z		n 0.47	7			>	_	DRa		Ŋ	υ		744	301	0	9		1148	13		7 12	ဖ	0
Utricularia vulgaris sens.str.	Lent	z		s		100	H	λ	_ _	DRa		2	4		159	22	0			874	11		7 12	7	0
Vaccinium microcarpum	Eric	z		s 0.81	1 30		O O	ح	ح	Node2		4	9		100	0	0			1339	12			-	1
Vaccinium myrtillus	Eric	z		n -0.61			ت ص	h Pn	>	Rhiz2		4	4		1886	701	-			1243	10, 16			7	2 0
Vaccinium oxycoccos	Eric	z		n 0.28		<u>а</u>	<u>ნ</u>		ح	Node2		_	9		725	246	0			1229	12		တ စ	7	1
Vaccinium uliginosum	Eric	z		n -0.39			ь	h Pn	8	Rhiz2		2	9		252	0	0			1897	12, 15	, 16		2	2 0
Vaccinium vitis-idaea	Eric	z		n -0.18			D d	Ч	M	Rhiz2		2	9		938	89	0	2.2		1474	10,	15		2	2 0
Valeriana dioica	Vale	z		n -0.67				0		Stol2		-	က		1171	0	0			968	7		80	9	3
Valeriana officinalis	Vale	z		n -0.64	4 175		م م	0	ح	0	Rhiz1	Ŋ	ις		2408	808	0	3.4	14.5	1115	7			ဖ	2
Valeriana pyrenaica	Vale	Ą		-0.35	5 110	٥	2		ح	0				Eur	195	ω			13.8	1151	1,3			Ŋ	2
Valerianella carinata	Vale	AR		2.15	5 15	a	ı <u>≓</u>	ے	ح	0		∞	က		547	99		6.4	15.8	931	3, 17		& 4	ω	0
Valerianella dentata	Vale	AR		-1.86	6 15	5 a	<u>آ</u>	٠	ح	0		7	က		009	45		3.9	15.7	800	4			7	0
Valerianella eriocarpa	Vale	A		-0.69	9 15		a	۔	ے	0		တ	7	Eur	29	0			16.0	826	3, 16		က	ω	3
Valerianella locusta	Vale	z		n -0.11	1 15		a	۔	ے	0		7	က		1358	238			15.3	925	16,	19		9	0
Valerianella rimosa	Vale	AR CR	œ	-2.55	5 15		a	.ر	ے	0		7	က		181	27			15.9	860	4		8	ω	3
Verbascum lychnitis	Scro	z		s -0.23	3 150		P Q		ح	0		7	က		42	0			16.5	790	3, 7		7	^	3
Verbascum nigrum	Scro	z		n -0.12	2 120		h		ᅩ	0		7	4		479	0			16.2	742	က		7 4	7	0
Verbascum pulverulentum	Scro	Α		s 0.94	135		ь Б	0	ح	0		တ	7		51	0			16.1	624	3, 16		က	7	2
Verbascum thapsus	Scro	z		n 0.27	7 200		b Pc	0	ح	0		7	4		1874				15.2	918	m		7	/	2
Verbascum virgatum	Scro	AN		0.35	5 100		2	0	ح	0		∞	7	Eur	339				15.8	870	3, 5, 17	7, 19	8	2	2
Verbena officinalis	Verb	AR		-0.43	3 67		2	0	ے	0		Н	Ŋ		857				15.8	859	3, 16		8	_	0
Veronica agrestis	Scro	AR		-0.38	8 10		F	. ر		0			က		1715				15.0	963	3, 4, 1	7	9 /	9	0 /
Veronica alpina	Scro	z		s -0.29	9 12		٥	_	ے	0		-	4		35		0	-0.7		1783	15		9	2	0
Veronica anagallis-aquatica	Scro	z		n 0.05	5 50		o T	z H	ح	Node1		∞	r2		1225	459			15.1	899	13, 14		7 10	_	0
Veronica arvensis	Scro	z		n 0.48	8 25		e		ح	0		∞	က		2614	793	4			1077	3, 4, 16	9	8	ဖ	0
Veronica beccabunga	Scro	z		n -0.31		<u>م</u>	Ĭ	y Ch	ح	Node1		7	4		2333	912	တ			1034	11, 14			9	0
Veronica catenata	Scro	z		n 0.37			арН	z Hy	Ч	Node1		2	9		926		4	3.8		816	13, 14		7	2	8
Veronica chamaedrys	Scro	z		n -0.50	m		O O		ح	Node2		Ŋ	4		2609		4			1095	1, 3, 6		9	9	2 0
Veronica filiformis	Scro	AN		2.69			م م		ح	Node2			-	Eur	2013		တ			066	3, 17			7	0 /
Veronica fruticans	Scro	z		s 0.11		σ.		_	~	0		~	က		26	0	0			1821	15, 16		8	^	2 0
Veronica hederifolia	Scro	AR		0.57			a	ے	۲	0		∞	3		1944	346				918	1, 3, 4,	, 17		7	0 9
Veronica montana	Scro	z		n 0.48			O a	_		Node2		^	က		1808	206				1029	_		9	9	0 9
Veronica officinalis	Scro	z		n -0.84			ਹ _	_		Node1		Ŋ	က		2507	754	œ	3.4		1125	7, 8		9	4	0
Veronica persica	Scro	AN		-0.37			ē	ے			Node1		-	Eur	2232	722	5		14.9	993	3, 4, 1		9	7	0 /
Veronica polita	Scro	Ą		0.07		а	<u>-</u>	ے		0		ω	4	Eur, As1	1237	107	œ		15.5	867			7	7	2
Veronica praecox	Scro	AN				5 a	<u>ا</u> _ ا	۲	h (0		8	3 c	Eur	9	0	0			618	3, 4, 8			8	1 0
Veronica scutellata	Scro	z		n -0.06		<u>م</u>				Node1		Ŋ	4		1877	226	က	3.4		1129	11, 13		တ ထ	2	0
Veronica serpyllifolia	Scro	z		n 0.80		<u>а</u>			ح	Node2		Ŋ	9		2652	884				1104	3, 5, 11	_	7	9	2 0
Veronica spicata	Scro	z		s 0.13			م م	င္ပ	ح	Node1		7	4		28	0			15.3	949			8	7	0
Veronica triphyllos	Scro	œ	z	-0.82	2 15	5 a		<u>,</u>	ᆮ	0		7	ე ი		33	0	0	2	16.1	069	3, 4		7 4	7	3 0
Veronica verna	Scro	N N	_	r -0.64		5 a		ے	ح	0		7	4		7	0		· I	16.2	618			8	2	0
Viburnum lantana	Capr	z		n 0.37			∐ d	ے	8	0		7	3		237	0	0	œ	16.2	292	1,3		7 5	7	2
Viburnum opulus	Capr	z		n -0.15	4		o F	ے	>	0		/	9		1854	292	-	3.6	15.0	1019	_		2 9	ဖ	0
Vicia bithynica	Faba	z	\exists	s -0.52	2 60	, L	oh	0	ح	0		၈	_		74	0	4	4.4	16.1	827	ო		4	ဖ	0

Taxon name	Fam	NS	cs	RS Chg	Hght	Len P1	P2 LF1	LF2 W C	Clone 1 Clone 2	\vdash	E1 E2	ပ	Origin	GB	R	CI Tja	jan Tjul	Prec	ပ္ပ	Br Habitats	<u>Н</u>	Z	S
Vicia cracca	Faba	z		n -0.37		۵	2	도	Rhiz1		5			2647	938		3.6 14.5		1083	3, 11	9 /	2	0
Vicia faba	Faba	AN			_	а	ᄔ					Crop				2			734	4, 17			0
Vicia hirsuta	Faba	z		n 0.05		а	Th	о Ч			2 3		`	1925	285		3.7 15.2		926	3, 6	2 2		0
Vicia lathyroides	Faba	z		n -0.3		a	ᆮ				2								808	8, 19		2	0
Vicia lutea	Faba	z		s -0.85		а	ᆮ	٥ د		-	-			28					844 Co	18, 19		<u></u>	-
Vicia orobus	Faba	z		s -0.34		٥	2				7 2			214	12		0 13	ω	1410	16		5	0
Vicia parviflora	Faba	z		s -1.05		а	ഥ	h 0		-	_					0			695	3, 4			0
Vicia sativa	Faba	z		n 0.19		а	4	0 4			8		`						991	9			0
Vicia sepium	Faba	z		n -0.43		۵	얻		Rhiz1		5		.,			4			1095	3, 6	9	9	0
Vicia sylvatica	Faba	z		n -0.71	1 150	٥	2	모	Rhiz1		l-								1119	1, 3, 16			0
Vicia tetrasperma	Faba	z		n 0.45			드	о ч			2						3.9 15.9		804	3, 4, 6			0
Vicia villosa	Faba	AN				Ø	卢	ە 2			က	c Eur							757	4			0
Vinca major	Apoc	AN		1.49		۵	ਠ	Ĭ L				Eur	`						873	1, 3, 17	2 6	2 6	0
Vinca minor	Apoc	AR		0.48	8 15	۵	ਠ		Node2			Eur	`				3.7 15.3		893	1, 3, 17	4		0
Viola arvensis	Viol	AR		-0.29	9 40	В	ᆮ	۰ د			4								40	4			0
Viola canina	Viol	z		n -0.87		۵	2	۰ م			5		`		183				1008	8, 10	8	5	0
Viola hirta	Viol	z		n -0.46	6 15	ď	hc	р 0	Rhiz	_	7 4			964					795	7			0
Viola kitaibeliana	Viol	N VU	_	_		В	Т				8						6.7 16.6		814	19			-
Viola lactea	Viol	z		s -1.08		۵	2				7			183					125	10			0
Viola lutea	Viol	z		n -0.69	9 20	٥	2	ᅩ	Rhiz2		4								181	7, 8, 16			0
Viola odorata	Viol	z		n -0.19		۵	얼		Stol2		7		`						833	7	2		0
Viola palustris	Viol	z		n -0.30	0 15	٥	은	ᅩ	Rhiz2	-	2		`						62	11, 14			0
Viola persicifolia	Viol	N EN	_	r -0.62	2 25	۵	24	о Ч			7	ပ							826	11		7 3	0
Viola reichenbachiana	Viol	z		n 0.20		۵	얼	۰ م			Н		`				3.8 15.5		869	1			0
Viola riviniana	Viol	z		n 1.07	_	۵	얼		Root		7 3			2741					1112	1, 7, 16			0
Viola rupestris	Viol	z		_			2	٥ د				O							1393	7	8	8	0
Viola tricolor	Viol	z		n -1.52		Ø	鱼	ح			2								992	4, 8, 19			0
Viscum album	Visc	z		n 0.97	1	۵	당				Н			923					788	3, 17	2 2		0
Vulpia bromoides	Poac	z		n 0.18		a	드				9		`		513	12 3			1006	3	8	2	0
Vulpia ciliata	Poac	z		s 0.78		В	ᆮ				-			9					716	80			_
Vulpia fasciculata	Poac	z		s 0.37		В	ᆮ	۰ 0			9						5.0 15.8		911 Co		က ဝ	_	_
Vulpia myuros	Poac	AR		1.55		а	느	р 0			8		`						99	3, 17			0
Vulpia unilateralis	Poac	N N		-0.56	92	а	ᆮ			-	9	Ēď					3.6 16.2		705	3, 7	က 6	8	0
Wahlenbergia hederacea	Camp	z		n -0.30		۵	2	٩ ٧	Node2		8								1280	11, 14			0
Wolffia arrhiza	Lemn	z		s -0.03	9	0.1 p	Ť	h Frag	ag										752	13	7 11		0
Woodsia alpina	Wood			r 0.11		٥	2	۰ م			2						0.4 11.6		171	15, 16	7 4	8	0
Woodsia ilvensis	Wood	N	_	r -0.10	0 10		hc	р 0			2 6					0	1.3 12.4		2108	16			0
Zannichellia palustris	Zann	z		n 0.17	2	20 p	Hy	h	Irreg Rhiz2		9 8		`				3.8 15.5		20	13, 14	7 12	8	2
Zea mays	Poac	AC			300		드	۰ د 0				Crop		95					820	4, 17	8		0
Zostera angustifolia	Zost	z		s -0.68	80	а Ж	Ť		Rhiz2	•	ر. د			131	27	9	4.3 15.0		926 Co		7 12	8	00
Zostera marina	Zost	z		n -0.86	9	о 20	Ť	모	Rhiz2		9			596	_	13	1.5 14.	11	2e Co	21, 23	6 12	80	00
Zostera noltei	Zost	z		s -0.5	1	12 p	Hy	h	Rhiz2		3			129		4	1.2 14.3	9 10	20 Co	21	8 11	80	ω

APPENDIX

Sources for plant height

Plant heights have been calculated from a range of sources and have been subject to personal adjustment. The main sources were Clapham, Tutin & Warburg (1962), Stace (1991, 1997) and Sell & Murrell (1996). Values that were thought to be too big, especially the height of procumbent species, were modified using information in Butcher (1961).

A nearly complete set of additional height values was taken from sources including *Flora Iberica* (Castroviejo et al., 1986-), a Czech flora (Dostál, 1958) and BSBI handbooks such as *Crucifers of Great Britain and Ireland* (Rich, 1991). Other such sources included Aeschimann & Burdet (1994), Hutchinson & Thomas (1966), Jermy, Chater & David (1982), Meikle (1984), Page (1997) and Preston (1995). The new values were checked against those derived from the main sources. For those species where there was a difference of more than a factor of 1.5 between the two sources, the discrepancy was resolved by making a judgement as to which seemed most suitable for British conditions. In addition, all heights of pteridophytes and of trees and shrubs exceeding 5 m have been critically examined.

A difficulty with creeping or procumbent plants is that the floras give shoot length but not plant height. For several such plants, the canopy height was estimated by Hill, using descriptions and personal experience. Likewise Preston estimated the heights of Aizoaceae (cf Preston & Sell, 1989).

Many difficulties in assigning height to a plant remain. The height of a fern is taken to be the length of its fronds. Scapose plants such as *Pinguicula lusitanica* may be very small except for their scape. In several scapose genera (e.g. *Bellis, Pilosella, Pinguicula, Plantago, Primula, Pyrola*), the length of the leaves is used as a measure of size. On the other hand, rosette plants with substantial inflorescences (e.g. *Sempervivum tectorum*) have been accorded the height of their inflorescence rather than the length of the leaves. It was impossible to be completely consistent. Maximum height is a general indication of the size of the plant rather than a precise measure.

The resulting table is inevitably a complex result of cited values and personal judgement. It was clear that authors repeat each other and that their information is often wrong. Overestimates abound because botanists take pleasure in extreme values. For example, British authors and *Flora Europaea* (Tutin et al., 1964-1980) give the height of *Ulmus glabra* as 40 m, higher than any other elm. This is clearly unrealistic, but authors' copying of height data has meant that the value 40 m is constantly repeated. Fortunately Bean (1950-1951) indicates a more realistic value of 30 m, which has been used here. We have in many other cases tried to drive heights down from extreme to typical values, by selecting the publication with the lowest values.

Definition of life forms

Life forms (Raunkiaer, 1934) are an example of what are now called 'plant functional types' (cf. Box, 1996). A modified version of Raunkiaer's system was set out by Clapham, Tutin & Warburg (1962), who specified a life form for almost all species. Their assignments are a valuable starting point but contain many inconsistencies. For PLANTATT, they have been comprehensively revised. The categories were partially redefined (Table A1).

Table A1. Life form categories from Clapham, Tutin & Warburg (1962) and revised categories

Category (CTW)	Definition (CTW)	PLANTATT	Definition (database)
Phanerophyte, mega-, meso-	>8 m	Ph	Mega-, meso- and microphanerophyte
Phanerophyte, micro-	2-8 m	Ph	(combined with taller phanerophytes)
Phanerophyte, nano-	25 cm-2 m	Pn	Nanophanerophyte
Chamaephytes	0-25 cm	Ch	Chamaephyte
Hemicryptophytes	Wintering buds at soil surface	hc	Hemicryptophyte
Geophytes	Herbs with wintering buds below the soil surface	Gb, Gn	Geophytes
Helophytes	Marsh plants	(not recognized)	
Hydrophytes	Water plants	Ну	Perennating buds submerged during winter
		Hz	Annual water plant
Therophytes	Passing unfavourable season as seeds	Th	Annual land plant, including those living on summer mud

The redefined categories are generally self-explanatory. As the database contains plant heights, the distinctions between phanerophytes and chamaephytes, and distinctions within phanerophytes, are not entirely necessary. If required, new categories can be derived using combinations of character's. For example German authors such as Mueller-Dombois & Ellenberg (1974) generally allow chamaephytes to be up to 50 cm tall and distinguish a category of dwarf shrubs (denoted by Z - Zwergsträucher). These are woody or semi-woody chamaephytes. It would be possible to reconstruct this category from our database, allowing for the fact that ordinary maximum heights of many of these bushes might be up to 100 cm.

Other categories included by Mueller-Dombois & Ellenberg (1974) are lianes, epiphytes and errant hydrophytes (unattached water plants). They define Hemicryptophytes as plants that die back to near the ground in the unfavourable season. Although worked out in some detail, their scheme remains somewhat tentative and we have not adopted it.

Examples of how life-form criteria are applied

The criteria given above result in many discrepancies between our definitions of life form and those of Clapham, Tutin & Warburg (1962). For example, the distinction between geophytes and

hemicryptophytes is often hard to apply with rhizomatous perennials. In principle, plants whose new shoots penetrate the surface before the advent of winter are hemicryptophytes, while those whose shoots remain well buried are geophytes. Thus *Phragmites australis*, with a relatively deep rhizome (Preston & Croft, 1997), has the life forms perennial **Hy** and **Gn**. In *Carex acutiformis*, however, many new shoots have already emerged by the autumn (Preston & Croft, 1997). It is also less strongly aquatic. It is therefore given the life forms **hc** and **Hy**.

In general, biennials have been classified as hemicryptophytes, but a few such as *Euphorbia lathyris*, which are elongated from the beginning, are chamaephytes.

It is instructive to consider some other cases (Table A2), which will not be discussed in detail.

Table A2. Some cases where life-form (LF) is difficult to apply or where our concept differs from that of Clapham, Tutin & Warburg (1962)

Species	LF (CTW)	LF (here)	Comment
Anagallis tenella	Ch	hc, Ch	Does not die back, but buds are at ground level. Life forms are the same as for <i>Trifolium repens</i> .
Iris foetidissma	Ch	hc	Buds are at ground level. Although winter-green, it is no more a chamaephyte than <i>Lolium perenne</i> .
Lavatera arborea	hc	Pn	A monocarpic plant. Not classified as Ph as it does not reach full size till its final season.
Origanum vulgare	Ch	Ch, hc	Genuinely intermediate; dies back to well below 25 cm in winter, regrowing from the base and from short shoots.
Polypodium vulgare	Gn, Ch	hc, Gn	Rhizomes are on or below surface; by analogy with Anagallis tenella more hc than Ch .
Pyrola media	hc	hc	Stems too short for Ch , although it is winter-green.
Saxifraga spathularis	hc	hc, Ch	Intermediate; the buds are slightly above the ground, although it is a rosette plant.
Tanacetum parthenium	hc	Ch, hc	Intermediate; dies back below 25 cm, with overwintering buds near the ground but mostly slightly above it.

Links between life forms and plant height

Because chamaephytes and our two categories of phanerophytes are defined on the basis of height, an effort was made to define life forms consistently by reference to plant height (Table A3). Sometimes, as in *Artemisia campestris*, the overwintering buds are at a substantially lower height than the height of the mature plant. Therefore, this scheme has not been followed exactly but has been used as a guide.

These definitions are necessarily imprecise. However, knowing that *Calluna vulgaris* has a typical maximum height of 60 cm suggests that it will often grow as a chamaephyte and often as a nanophanerophyte. This is indeed the case; *C. vulgaris* is the classic dwarf shrub.

Table A3. Chamaephyte and phanerophyte categories in relation to plant height

Typical maximum plant height (cm)	Primary life form	Secondary life form
3-39	Ch	
40-69	Ch	Pn
70-299	Pn	
300-399	Pn	Ph
400-	Ph	

Clonality

Clonality can be defined in various ways. In an enumeration for Central Europe, Klimeš et al. (1997) defined clonal growth as synonymous with vegetative multiplication, which results in the production of new, genetically identical descendants (ramets) with the potential to become independent of the mother organism. According to this definition, plants that produce a new ramet each year but do not spread laterally (for example many orchids) are clonal. Klimeš et al. recognize 21 different clonal types. These are described in Klimeš's excellent website Clopla I (http://www.butbn.cas.cz/klimes/clopla1.htm); all species of Central Europe, including the majority of British and Irish plants, are assigned to one or more clonal types.

Here we adopt a more familiar definition of clonal growth, namely vegetative reproduction combined with lateral spread - i.e. spreading through the formation of clonal patches or clumps, or through fragmentation and subsequent dispersal of plant parts.

Broad Habitats

The Broad Habitat Classification, developed as part of the UK Biodiversity Action Plan (Jackson, 2000; UK Biodiversity Group, 1998; UK Biodiversity Steering Group, 1995), provides a comprehensive framework for surveillance of the UK countryside. We categorized the habitats of plants by their preferences for Broad Habitats.

In the UK Biodiversity Action Plan (UK Biodiversity Steering Group, 1995), 37 Broad Habitat categories were defined. These included some habitats, such as limestone pavements, that are quite narrow but were specified because they are priority habitats for conservation. In a later publication (UK Biodiversity Group, 1998), the number of terrestrial and freshwater Broad Habitats was reduced to 17. Limestone pavements were included in the Broad Habitat inland rock. Ten coastal and marine Broad Habitats were added shortly afterwards (UK Biodiversity Group, 1999). Out of the 27 Broad Habitats, 21 support vascular plants (see Table 8, above).

Broad Habitats are intended to be comprehensive and exclusive. In other words, every place in which a vascular plant is found ought to belong to one and only one Broad Habitat. Although the definitions of Broad Habitats are in many cases obvious, there was a need for more precise circumscription to define the boundaries between them. For terrestrial and freshwater habitats this guidance is now available (Jackson, 2000). The guidance not only gives written definitions, but relates Broad Habitats to the units of the National Vegetation Classification (NVC; Rodwell, 1991-2000).

Jackson's (2000) notes for guidance are the basis of the cross-reference and definitions used here (Table A4). In a small number of cases, we have diverged from her interpretations. The basis of our disagreement was often the scale at which we wished to view the vegetation. Thus we have treated bog pools as strictly bog features (not as open water) and we treat rock-free maritime grassland as neutral grassland (not as supralittoral rock). Other interpretations are possible but result in floristically less homogeneous Broad Habitats.

Table A4. Assignment of NVC communities to Broad Habitats for the purpose of ascribing habitat preferences. Sequential runs of numbers are indicated by hyphens, e.g. 21-23, which signifies the sequence 21,22,23. Some NVC communities were assigned to two Broad Habitats; where this is the case, the community is marked by an asterisk, to show that it is also listed under another Broad Habitat.

No	Name	NVC communities
ı	Broadleaved, mixed and yew woodland	W 1-17,19
2	Coniferous woodland	W 18
3	Boundary and linear features	W 21-23,24*; OV 18*,19*,21*,22*,24*,25*,27
4	Arable and horticultural	OV 1-11,13,14-17,18*,19*,21*,22*,36
5	Improved grassland	MG6*,7; OV12,23*,25*
6	Neutral grassland	W24; MC9-12; MG1-5,6*; MG8-13; OV28*
7	Calcareous grassland	CG1-14
8	Acid grassland	U I- 6,19
9	Bracken	U 20; W 25
10	Dwarf shrub heath	H I-10,12,16,18,21; M I5*,16; OV 34
П	Fen, marsh and swamp	M 4-14,22-24,25*,26-38; S 1-19,20*,22-28; OV 26,28*,29-
12	Bog	MI-3,15*,17-21,25*
13	Standing water and canals	A I-7,8*,9*,10,(II-I6)*,19*,20*,2I-24
14	Rivers and streams	A 8*,9*,(11-16)*,17,18,19*,20*
15	Montane habitats	H 13-15,17,19,20,22; U 7-15,18; W 20
16	Inland rock	U16,17,21; OV37-40,41*
17	Built-up areas and gardens	OV 20,23*,24*,41*,42
18	Supralittoral rock	MC 1-8
19	Supralittoral sediment	HII; SD I-19
21	Littoral sediment	\$20,21; \$M1-28

It is pertinent here to consider the definitions, drawing attention to less obvious features and to where we have differed from Jackson (2000).

BHI Broadleaved, mixed and yew woodland

Broadleaved woodland is defined as woodland with broadleaved trees having at least 20% canopy cover. In practice, most woodland has closed canopy. Juniper scrub is included in this type if it is large enough to result in a woodland understorey (W19). Other scrub types are treated as edge features (BH3), because hedges are often where they occur. The underscrub community W24 is shared between woodland (BHI) and neutral grassland (BH6).

BH2 Coniferous woodland

This category is clearly defined and corresponds to native pine woodland (W18) in the NVC. Stands of planted conifers normally have a subset of the normal broadleaved woodland flora growing under them. There is no corresponding NVC type. Planted conifers have therefore been under-represented, and the fern *Dryopteris dilatata*, which is the commonest vascular plant in upland conifer plantations, did not appear as a conifer specialist in our floristic database, but its preference was added by us later.

BH3 Boundary and linear features

Apart from scrub that forms hedges, boundary and linear features are not directly cross-referenced to the NVC. They include hedges, tree-lines, walls, earth banks, grass strips and dry ditches. Note that roads, tracks and railways in urban areas belong to the urban BH17.

BH4 Arable and horticultural

Commercial orchards are included here, as well as field crops. Note that horticulture here is defined as commercial horticulture and does not include domestic gardens and allotments, which are included in BH17. The NVC communities classified as OV1-11,13-19,21,22,36 are included here.

BH5 Improved grassland

This has few characteristic species, and is typically dominated by sown ryegrass Lolium perenne or clover Trifolium repens. OV12, the Poa annua-Myosotis arvensis community, is indicated in British Plant Communities (Rodwell, 1991-2000) as being mainly a disturbed element in improved pasture and has been included here.

BH6 Neutral grassland

The mesotrophic grassland types MGI-6,8-13 are the core of the neutral grassland category. Coastal grazing marsh is included here. Four of the coastal cliff grasslands, MC9-12, are not necessarily or normally rocky and have been included here in BH6. OV28, an inundation grassland, is shared between BH6 and BH11.

BH7 Calcareous grassland

By convention, this includes all NVC types included in the CG class. As a result, montane calcareous vegetation is in BH7, along with chalk grassland.

BH8 Acid grassland

Only lowland and subalpine grassland are included here; vegetation types that would normally be found above the timberline are in BH15. Communities U1-6 form the core of this type. The fern community U19 is treated in BH8. It is usually a mosaic element in grassland, though it also occurs on steep banks by rivers and could therefore be included also in the broad definition (not used here) of BH14.

BH9 Bracken

This is small type, defined as unwooded land dominated by bracken *Pteridium aquilinum*. BH9 has few characteristic species, because it is usually a derivative of grassland or forest. Just two NVC types, U20 and W25, are included here.

BHI0 Dwarf shrub heath

The heath type BH10 includes vegetation with at least 25% cover of Ericaceae or dwarf gorse *Ulex minor*. Coastal heath is included in this category, except for dune heath, which is assigned to BH19. Dwarf shrub communities on blanket bogs are strictly included in BH12, but this is a relatively minor habitat for them and has not been recognized in the cross-reference. The standard heathland communities H1-10,12,16,18,21, together with the wet heath communities M15,16 form the core of this community. The bizarre OV34, a chive *Allium schoenoprasum* community forming a mosaic element on shallow soils in coastal heath, is included here.

BHII Fen, marsh and swamp

This is a very wide category and includes reedbeds, swamps, tall-herb fens, flushes, springs, marshes, rush-pastures and wet grassland. Mud communities of dried-up ponds and riverbeds (e.g. OV30) have been included here, although they belong more strictly to BH13 and BH14 unless they are very extensive (>0.25 ha). Types M4-14,22-38, all swamp communities except *Scirpus maritimus* S21, and OV 26,28-33,35 are included. We have excluded the bog-like communities (*Erico-Sphagnion*) that are found in very acid lowland valley-mires.

BHI2 Bog

Bogs are defined strictly only as ombrotrophic bogs. However, we have lumped all *Erico-Sphagnion* vegetation, including M21, in BH12 even if it the vegetation occurs in valley mires, together with bog pool vegetation M1-3. This is to prevent the characteristic species of BH11 being too heterogeneous. The NVC types included are M1-3,15,17-21,25.

BH13 Standing water and canals

Only aquatic vegetation has been cross-referenced to this type, i.e. communities A1-16,19-24. Mud communities and marginal vegetation are referred to BH11.

BHI4 Rivers and streams

This Broad Habitat is treated in much the same way as BH13. According to the strict definition, all vegetation between the banks of a river counts as belonging to BH14. For the purposes of defining characteristic species, river-bank vegetation has been treated as belonging to other types such as inland rock. Thus the communities included in BH14 are A8,9,11-20. Several of these communities are also characteristic of BH13.

BHI5 Montane habitats

This type is defined by having distinctive arctic-alpine species, provided that they are not calcicolous. Calcareous montane vegetation is included in BH7. BH15 includes montane heaths H13-15,17,19,20,22, grassier types U7-15,18, and a willow scrub type W20.

BH16 Inland rock

This heterogeneous Broad Habitat includes limestone pavement, cliffs, caves, scree, quarries and vegetation on skeletal soils over rock. Communities U16,17,21 and OV37-41 are assigned to BH16.

BH17 Built-up areas and gardens

Urban habitats were largely ignored by the NVC surveyors. Most of the characteristic species are neophytes, while the commonest species are widespread natives and archaeophytes (Hill, Roy

& Thompson, 2002). Very few NVC communities are really characteristic of the built environment. Pavement and wall communities OV20,42 are assigned wholly to BH17; OV23,24,41 are assigned to BH17 but shared with other Broad Habitats.

BH18 Supralittoral rock

It is clear from the Habitat Statement for supralittoral rock (UK Biodiversity Group, 1999) that maritime grassland is not included. For that reason, MC9-11,12 have been treated as neutral grassland, BH6. Only MC1-8 are included in BH18.

BH19 Supralittoral sediment

This includes strandlines, shingle, machair and coastal dunes. It includes all the NVC types SDI-19, together with the dune heath type HII.

BH20 Littoral Rock

Intertidal rock normally lacks vascular plants and no vascular-plant species or vegetation type is characteristic of it.

BH21 Littoral sediment

This includes saltmarshes and saltmarsh pools.

BH23 Inshore sublittoral sediment

One vascular plant, Zostera marina, occurs in this habitat, which is not considered further.

Initial calculation of species' preferences for Broad Habitats

For the majority of species, habitat preferences were based on quadrat data. Two major datasets were available, the original data used to derive the association tables in *British Plant Communities* (NVC; Rodwell, 1991-2000) and quadrat samples collected for Countryside Survey 2000, CS2000 (Haines-Young et al., 2000).

The quadrat data used to create the NVC categories were supplied by JNCC as an MS Access database. This had been created from files in the format of the VESPAN package (Malloch, 1985). There was no information on the NVC community to which each quadrat had been assigned. Therefore, the computer program TABLEFIT (Hill, 1996) was used to assign 31216 quadrats to NVC communities using species' Domin scores. The median goodness-of-fit was 67%. Only four samples had no fit; these were assigned to a community by personal judgement. NVC plant communities were then attributed to Broad Habitats using the cross-reference outlined above (Table A4). All CS2000 samples had been allocated to BAP Broad Habitat types in the field.

After quadrats had been assigned to Broad Habitats, species' frequencies in each Broad Habitat were calculated. Frequencies were used to calculate preferences for Broad Habitats. For each species s and BH h, we calculated an odds-ratio index:

 Q_{sh} = observed odds for species s in habitat h / expected odds

$$= \left(\frac{n_{sh}/(n_{s+} - n_{sh} + 0.5)}{e_{sh}/(n_{s+} - e_{sh})}\right)$$

where

 n_{sh} = observed number of occurrences of species s in BH h

 $n_{s+} = \Sigma_h n_{sh} = \text{total number of occurrences of species s}$

 e_{sh} = expected number of occurrences of species s in BH h.

The expected number of occurrences

$$e_{sh} = n_s N_h / N_+$$

where

 N_h = number of quadrat samples in BH h

 $N_{+} = \Sigma_{h} N_{h} = \text{total number of quadrat samples.}$

Species s was deemed to have a preference for BH h if $Q_{sh} > 4$.

Extension and validation of species' preferences

Many rare, scarce or uncommon native species are not represented either in the NVC quadrats or in CS2000 samples. Furthermore, there was the possibility that uneven sampling of Broad Habitats could have resulted in some wrong indications of preference.

First, we extended the list of BH preferences to species not adequately sampled by the NVC or CS2000, using the text prepared for the *New Atlas*, together with other literature sources (e.g. Stewart, Pearman & Preston, 1994; Wigginton, 1999). Much of the initial work was done by Bill Meek (CEH); the resulting table of preferential species was checked by D.A. Pearman (BSBI), as well as by ourselves and other CEH staff. In addition, preferences were checked against other data in PLANTATT. For example, species attributed to BH13 (Standing water and canals) and BH14 (Rivers and streams) were checked for their Ellenberg moisture (F) values. Those for which F<8 were scrutinized carefully. Some were excluded from the list of characteristic species of these Broad Habitats.

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