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**Guidelines for the selection of biological SSSI's  
Part 2: Detailed guidelines for habitats and species groups**

**11 VASCULAR PLANTS (FLOWERING PLANTS, FERNS AND THEIR ALLIES)**

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## **11 VASCULAR PLANTS (FLOWERING PLANTS, FERNS AND THEIR ALLIES)**

### **1 Introduction**

- 1.1 In seeking species representation within a vascular flora which includes 1,593 taxa of specific rank (Clapham, Tutin & Warburg 1981), site selection has to give particular attention to the rarer and more threatened species. The more common and widespread species tend to form the plant communities which are the basis of selection for habitat or vegetation types, though such selection will also include some of the rarer species as well. From the maps of Atlas of the British flora (Perring & Walters 1962), its Critical supplement (Perring & Sell 1978) and subsequent revisions of some of these, mainly at the rarer end of the scale and of ferns (Jermy et al. 1978), lists of rare and scarce species have been compiled. Nationally rare species are defined as those occurring in 1-15 10 x 10 km squares of the National Grid (Table 24) and nationally scarce species as those occurring in 16-100 such 10 km grid squares (Table 25).
- 1.2 The British Red Data Book for vascular plants (Perring & Farrell 1983) lists 317 species or subspecies in its four categories - "extinct", "endangered", "vulnerable" and "rare" (i.e. species or subspecies believed extinct or surviving in 1-15 squares). Species of Hieracium and Rubus are omitted from both nationally rare and nationally scarce categories, but species of Euphrasia and Sorbus (many of them endemic) are included. The Wildlife and Countryside Act 1981 gives special protection to 92 vulnerable or endangered vascular plant species listed in its Schedule 8 (see 3.1 and Tables 24 and 25). Most of these are species in the highest category of rarity (present in only 1-5 10 km squares), but a few species have been admitted because their attractiveness makes them especially vulnerable to collecting. One species of charophyte, Lamprothamnium papulosum, is similarly protected (see C.12, 3).

### **2 International importance**

- 2.1 The British vascular flora is not rich by comparison with that of continental Europe. Island isolation has resulted in floristic impoverishment, yet it has been too recent for any appreciable degree of endemism to have developed. Many species which have a relict or fringe distribution here are common on the continent, for example many species of our rare orchids (Matthews 1955). The elements of our flora regarded as especially important by overseas botanists are the following.

- 2.1.1 The strongly Atlantic element restricted to the north-west European seaboard (and sometimes the Atlantic Isles), which has several species better represented in Britain and Ireland than elsewhere. These range from common British species, some of which are community dominants (e.g. all three species of gorse Ulex, bluebell Hyacinthoides non-scripta and heath rush Juncus squarrosus) to species of specialised habitats (e.g. Dryopteris aemula, Pinguicula lusitanica and Rhynchospora alba).
- 2.1.2 Maritime species in the wide range of coastal habitats which are especially well represented in Britain (see C.1).
- 2.1.3 Species which are declining and threatened in continental Europe, often through loss of habitats as a result of agricultural and other development.
- 2.1.4 Species or assemblages which are regarded as important in the study of plant geography. These include plants with markedly discontinuous distributions (e.g. outposts of those occurring mainly in North America, northern Europe, the Alps or the Mediterranean region) and unusual combinations of different phytogeographical elements (e.g. Arctic-Alpine and Continental Southern). Notable 'refugia' where particular floristic elements have survived during periods of unfavourable post-glacial climatic change are also important.
- 2.1.5 Endemic species and taxa with subspecies or regional race status peculiar to Britain (Threatened Plants Unit 1983), as examples of genetic divergence and perhaps incipient evolution of new species.

### **3 Site selection requirements**

There should be a presumption for selecting vascular plant sites on the following grounds.

#### **3.1 Schedule 8 species**

All sites with viable populations should be selected. The schedule will be reviewed at five-yearly intervals, and note should be taken of any additions or deletions. The next revision will be in 1991.

### 3.2 Red Data Book species

All RDB species' localities should be regarded as candidate sites.

**One** RDB species qualifies a site for selection if it has:

3.2.1 the largest population of this species in Great Britain;

3.2.2 a good population of the species on a site which is itself a good example of a habitat type but has not already been chosen;

3.2.3 a good population of the species in an AOS supporting a substantial proportion of localities for the species;

3.2.4 a good population on the edge of the species' geographical range; or  
3.2.5 the only occurrence of the species in the particular AOS.

Judgement of a "good population" should be made in discussion with the CSD rare plants specialist, who holds precise data on both distribution and population sizes of RDB species. (See 3.4 for Senecio cambrensis.)

### 3.3 Combination of species occurring in 1-100 10 km squares

A simple scoring procedure is used to assess combinations of species within the two classes, nationally rare and nationally scarce (Tables 24 and 25). Schedule 8 species (see 3.1) rate 200. Species occurring in 1-15 10 km squares (other than Schedule 8 species) rate 100. Species occurring in 16-100 10 km squares rate 50. A total score of 200 or more qualifies a site for selection. Presence of two RDB species, for example, thus qualifies a site for selection.

### 3.4 Endemic species

The largest populations of endemic species (see Tables 24 and 25) in each AOS should be selected, when practicable. As the Euphrasia species are hard to identify, verification of status will be difficult, and site selection will have to be based on the best information available at the time. Senecio cambrensis is an ephemeral species of waste ground, and its localities should not be selected unless it happens to be growing adjacent to an area which qualifies on other grounds.

### 3.5 Non-endemic species threatened in Europe

These number 23 species, of which 17 are RDB species; five of these are on Schedule 8 and Senecio congestus is believed to be extinct. This leaves for consideration Alopecurus alpinus, Deschampsia setacea, Harnmarbya paludosa, Luronium natans, Petroselinum segetum and Pilularia globulifera. All of these are nationally scarce in Britain (see Table 25) except Petroselinum segetum, which is declining. The best population of each species in every AOS in which it occurs as a native should be selected.

### 3.6 Declining species and species at the edge of their range

If an AOS contains species which are known to have declined markedly within Britain but are not yet in the nationally rare or nationally scarce category, particularly large populations may be selected, in consultation with the CSD rare plants specialist. Examples are Eriophorum latifolium, Orchis morio, Platanthera bifolia, P. chlorantha and Pyrola minor. In addition, any particularly large population of a species with restricted distribution at the edge of its range or a population which appears phenotypically distinct from the prevailing form may be selected. Regionally rare species are of great concern to local botanists, and at least one locality per relevant AOS should be selected. A regionally rare species is defined as one with 15 or fewer localities in an NCC region. (For this purpose a locality is defined as being of no greater area than one square kilometre.)

### 3.7 Floristic assemblages

Many, perhaps most, localities with particularly good species lists will be selected either for habitat importance or for presence of rare or scarce species. There are, nevertheless, a limited number of places with a rich flora which will not qualify under these other attributes but which have a valid claim for selection. Assessment is difficult, particularly when more than one habitat is involved, but if a locality has 75% or more of the total vascular plant species list for a community type of the NVC it should qualify for selection.

### 3.8 Microspecies and hybrids

Many of these will be represented by site selection on other grounds, but, when this is not the case, all microspecies in genera such as Rubus, Hieracium, Taraxacum, Euphrasia and Salicornia should be represented on at least one SSSI somewhere in Britain. The same should apply to recognised, regularly occurring hybrids of native species. The CSD rare plants specialist will seek to ensure this representation, in consultation with external specialists in the particular plant groups.

#### **4 References**

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**Table 24 Red Data Book species of vascular plants** (Perring & Farrell 1983 with later additions)

E	=	Endemic		
S	=	Listed on Schedule 8		
*	=	Extinct		
		Adonis annua		Carex buxbaumii
		Agrostemma githago		Carex chordorrhiza
		Ajuga chamaepitys		* Carex davalliana
*		Ajuga genevensis	S	Carex depauperata
		Alchemilla acutiloba		Carex flava
		Alchemilla glaucescens		Carex lachenalii
		Alchemilla gracilis		Carex microglochin
E		Alchemilla minima		Carex muricata subsp. muricata
		Alchemilla monticola		Carex norvegica
		Alchemilla subcrenata		Carex ornithopoda
S		Alisma gramineum		Carex rariflora
		Allium ampeloprasum		Carex recta
		Allium babingtonii		Carex tomentosa
S		Allium sphaerocephalon		Caucalis platycarpus
S		Althaea hirsute		Centaurea calcitrapa
S		Alyssum alyssoides		Centaurea cyanus
		Anagallis foemina		* Centaurium latifolium
		Anthaxanthum puellii		Centaurium scilloides
S		Apium repens		Centaurium tenuiflorum
S		Arabis alpina	S	Cephalanthera rubra
S		Arabis scabra		Cerastium arcticum subsp. edmondstonii
(		Arenaria norvegica subsp. anglica		Cerastium brachypetalum
(		Arenaria norvegica subsp. norvegica		Chenopodium glaucum
		Armeria maritima subsp. elongata	S	Chenopodium vulvaria
*		Arnoseris minima	S	Cicerbita alpina
S		Artemisia campestris		Cirsium tuberosum
		Artemisia norvegica		Cochlearia micacea
		Asparagus of ficinalis subsp. prostratus	S	Corrigiola litoralis
		Aster linosyris	S	Cotoneaster integerrimus
		Astragalus alpinus	S	Crassula aquatica
		Atriplex longipes	S	Crepis foetida
		Bartsia alpina		Crocus purpureus
*		Bromus interruptus		Cyclamen hederifolium
		Bromus madritensis		Cynodon dactylon
		Bromus tectorum	S	Cynoglossum germanicum
		Buglossoides purpureocaerulea	S	Cyperus fuscus
		Bunium bulbocastanum	S	Cypripedium calceolus
S		Bupleurum baldense	S	Cystopteris dickieana
S*		Bupleurum falcatum	S	Damasonium alisma
*		Bupleurum rotundifolium	S	Dianthus gratianopolitanus
		Buxus sempervirens	S	Diapensia lapponica
E		Calarnagrostis scotica		Draba aizoides
S		Calamintha sylvatica		Dryopteris cristata
*		Campanula persicifolia		Echium plantagineum
		Campanula rapunculus		Elatine hydropiper
		Carex atrofusca		Eleocharis austriaca

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	<i>Eleocharis parvula</i>	S	<i>Hirnantoglossum hircinum</i>
E	<i>Epipactis dunensis</i>	*	<i>Holosteum umbellatum</i>
ES	<i>Epipactis youngiana</i>	S	<i>Homogyne alpina</i>
S	<i>Epipogium aphyllum</i>	*	<i>Hydrilla verticillata</i>
S	<i>Equisetum ramosissimum</i>		<i>Hypericum linarifolium</i>
	<i>Erica ciliaris</i>		<i>Hypochoeris maculata</i>
	<i>Erica vagans</i>		<i>Iris spuria</i>
S	<i>Erigeron borealis</i>		<i>Iris versicolor</i>
	<i>Eriocaulon aquaticum</i>		<i>Isatis tinctoria</i>
S	<i>Eriophorum gracile</i>		<i>Isoetes histrix</i>
S	<i>Eryngium campestre</i>		<i>Juncus capitatus</i>
	<i>Euphorbia hyberna</i>		<i>Juncus dudleyi</i>
S*	<i>Euphorbia peplis</i>		<i>Juncus filiformis</i>
	<i>Euphorbia serrulata</i>		<i>Juncus mutabilis</i>
*	<i>Euphorbia villosa</i>		<i>Juncus nodulosus</i>
E	<i>Euphrasia cambrica</i>		<i>Juncus subulatus</i>
E	<i>Euphrasia campbelliae</i>		<i>Kobresia simpliciuscuia</i>
E	<i>Euphrasia eurycarpa</i>		<i>Koeleria vallesiana</i>
E	<i>Euphrasia heslop-harrisonii</i>		<i>Koenigia islandica</i>
E	<i>Euphrasia rhumica</i>	S	<i>Lactuca saligna</i>
E	<i>Euphrasia rivularis</i>		<i>Lavatera cretica</i>
E	<i>Euphrasia rotundifolia</i>		<i>Ledum groenlandicum</i>
E	<i>Euphrasia vigursii</i>		<i>Leersia oryzoides</i>
	<i>Festuca caesia (= longifolia)</i>		<i>Leucojum aestivum</i>
8	<i>Filago gallica</i>		<i>Leucojum vernum</i>
S	<i>Filago lutescens (= apiculata)</i>		<i>Limonium bellidifoliurn</i>
	<i>Filago pyramidata (= spathulata)</i>	?ES	<i>Limonium paradoxum</i>
S	<i>Fumaria martinii</i>	ES	<i>Limonium recurvum</i>
E	<i>Fumaria occidentalis</i>	?E	<i>Limonium transwallianum</i>
S	<i>Gagea bohemica</i>		<i>Limosella australis</i>
*	<i>Galeopsis segetum</i>		<i>Linaria supina</i>
	<i>Galium debile</i>	S	<i>Liparis loeselii</i>
	<i>Galium fleurotii</i>	S	<i>Lloydia serotina</i>
	<i>Galium spurium</i>		<i>Lobelia urens</i>
	<i>Galium tricornutum</i>		<i>Lonicera xylosteum</i>
	<i>Gastridium ventricosum</i>		<i>Lotus angustissimus</i>
	<i>Genista pilosa</i>		<i>Ludwigia palustris</i>
S	<i>Gentiana nivalis</i>		<i>Luzula pallescens</i>
S	<i>Gentiana verna</i>	S	<i>Lychnis alpina</i>
S	<i>Gentianella ciliata</i>		<i>Lychnis viscaria</i>
	<i>Gentianella uliginosa</i>	S	<i>Lythrum hyssopifolia</i>
	<i>Geranium purpureum subsp. forsteri</i>		<i>Maianthemum bifolium</i>
	<i>Geranium purpureum subsp. purpureum</i>		<i>Matthiola incana</i>
S	<i>Gladiolus iilyricus</i>		<i>Matthiola sinuata</i>
S	<i>Gnaphalium norvegicum</i>	S	<i>Melampyrum arvense</i>
	<i>Gnaphaliurn luteoalbum</i>	S	<i>Mentha pulegium</i>
	<i>Halimione pedunculata</i>		<i>Mibora minima</i>
	<i>Helianthemum apenninum</i>		<i>Minuartia rubella</i>
	<i>Helianthemum canum subsp. levigatum</i>	S	<i>Minuartia stricta</i>
	<i>Herniaria ciliolata</i>		<i>Moneses uniflora</i>
	<i>Herniaria glabra</i>		<i>Muscari atlanticum</i>
	<i>Hierochloe odorata</i>		<i>Myosotis alpestris</i>



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	<i>Najas flexilis</i>		<i>Rumex rupestris</i>
S	<i>Najas marina</i>		<i>Sagina intermedia</i>
	<i>Narcissus obvallaris</i>		<i>Sagina normaniana</i>
	<i>Neotinea maculata</i>		<i>Sagittaria rigida</i>
	<i>Oenothera stricta</i>		<i>Salix lanata</i>
S	<i>Ononis reclinata</i>		<i>Salvia pratensis</i>
S	<i>Ophioglossum lusitanicum</i>	S	<i>Saxifraga cernua</i>
S	<i>Ophrys holoserica</i> (= <i>fuciflora</i> )	S	<i>Saxifraga cespitosa</i>
S	<i>Ophrys sphegodes</i>		<i>Saxifraga hirculus</i>
S	<i>Orchis militaris</i>		<i>Saxifraga rivularis</i>
S	<i>Orchis simia</i>	*	<i>Saxifraga rosacea</i>
	<i>Ornithopus pinnatus</i>		<i>Scheuchzeria palustris</i>
S	<i>Orobanche caryophyllacea</i>		<i>Schoenus ferrugineus</i>
S	<i>Orobanche loricata</i>		<i>Scirpus holoschoenus</i>
	<i>Orobanche maritima</i>	*	<i>Scirpus hudsonianus</i>
	<i>Orobanche purpurea</i>	S	<i>Scirpus triquetrus</i>
S	<i>Orobanche reticulata</i>	S	( <i>Scleranthus perennis</i> subsp. <i>perennis</i> )
*	<i>Otanthus maritimus</i>		( <i>Schleranthus perennis</i> subsp. <i>prostratus</i> )
	<i>Oxytropis campestris</i>	S	<i>Scorzonera humilis</i>
	<i>Oxytropis halleri</i>		<i>Scrophularia scorodonia</i>
	<i>Paeonia mascula</i>	S	<i>Selinum carvifolia</i>
S	<i>Petrorhagia nanteuilii</i>	E	<i>Senecio cambrensis</i>
	<i>Peucedanum officinale</i>	*	<i>Senecio congestus</i>
	<i>Phleum phleoides</i>	S	<i>Senecio paludosus</i>
S	<i>Phyllodoce caerulea</i>		<i>Seseli libanotis</i>
	<i>Physospermum cornubiense</i>		<i>Silene conica</i>
	<i>Phyteuma spicatum</i>		<i>Silene italica</i>
*	<i>Pinguicula alpina</i>		<i>Silene otites</i>
	<i>Poa flexuosa</i>		<i>Sisymbrium irio</i>
	<i>Poa infirma</i>	E	<i>Sorbus anglica</i>
	<i>Polemonium caeruleum</i>	E	<i>Sorbus arranensis</i>
	<i>Polycarpon tetraphyllum</i>	E	<i>Sorbus bristoliensis</i>
	<i>Polygala amara</i>	E	<i>Sorbus eminens</i>
	<i>Polygala austriaca</i>	E	<i>Sorbus lancastriensis</i>
S	<i>Polygonatum verticillatum</i>	E	<i>Sorbus leptophylla</i>
	<i>Polygonum dumetorum</i>	E	<i>Sorbus leyana</i>
S	<i>Polygonum maritimum</i>	E	<i>Sorbus minima</i>
	<i>Potamogeton acutifolius</i>	E	<i>Sorbus pseudofennica</i>
	<i>Potamogeton epihydrus</i>	E	<i>Sorbus subcuneata</i>
	<i>Potamogeton nodosus</i>	E	<i>Sorbus vexans</i>
	<i>Potamogeton rutilus</i>	E	<i>Sorbus wilmottiana</i>
	<i>Potentilla fruticosa</i>		<i>Spartina alterniflora</i>
S	<i>Potentilla rupestris</i>		<i>Spergularia bocconeii</i>
S	<i>Pulicaria vulgaris</i>	*	<i>Spiranthes aestivalis</i>
S	<i>Pyrus cordata</i>		<i>Spiranthes romanzoffiana</i>
S	<i>Ranunculus ophioglossifolius</i>	S	<i>Stachys alpina</i>
S	<i>Rhinanthus serotinus</i>	S	<i>Stachys germanica</i>
ES	<i>Rhynchosinapis wrightii</i>	E	<i>Taraxacum acutum</i>
S	<i>Romulea columnae</i>	E	<i>Taraxacum clovense</i>
	<i>Rorippa austriaca</i>		<i>Taraxacum cymbifolium</i>
*	<i>Rubus arcticus</i>		<i>Taraxacum glaucinum</i>
	<i>Rumex aquaticus</i>		<i>Taraxacum hygrophilum</i>

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- E *Taraxacum pseudonordstedtii*
- Taraxacum scanicum*
- Taraxacum ziphoideum*
- Tetragonolobus maritimus*
- S *Teucrium botrys*
- Teucrium chamaedrys*
- S *Teucrium scordium*
- Thlaspi perfoliatum*
- Thymus serpyllum*
- S *Trichomanes speciosum*
- Trifolium bocconeii*
- Trifolium incarnatum* subsp. *molinerii*
- Trifolium stellatum*
- Trifolium strictum*
- Trinia glauca*
- Tuberaria guttata* subsp. *breweri*
- Turritis glabra*
- Valerianella eriocarpa*
- Valerianella rimosa*
- Veronica fruticans*
- Veronica praecox*
- S *Veronica spicata* subsp. *spicata*
- S *Veronica triphyllos*
- Veronica verna*
- Viola kitaibeliana*
- S *Viola persicifolia*
- Viola rupestris*
- S *Woodsia alpina*
- S *Woodsia ilvensis*

**Table 25 Nationally scarce species of vascular plants**

E = Endemic

S = Listed on Schedule 8

<u>Species</u>	<u>No. of 10 km squares</u>
Aceras anthropophorum	58
Aconitum anglicum	76
Actaea spicata	26
Adiantum capillus-veneris	21
Alchemilla glomerulans	26
Alchetrilla wichurae	37
Allium oleraceum	94
Allium schoenoprasum	16
Allium scorodoprasum	74
Alopecurus aequalis	82
Alopecurus alpinus	17
Alopecurus bulbosus	26
Althaea officinalis	73
Andromeda polifolia	69
Apera interrupta	21
Apera spica-venti	<60
Arctous alpinus	63
Arum italicum	43
Asplenium billotii	76
Asplenium septentrionale	26
Asplenium trichomanes subsp. trichomanes	54
Athyrium distentifolium	30
Betula nana	48
Brassica oleracea	33
Briza minor	17
Bromus benekenii	23
Bromus diandrus	56
Bupleurum tenuissimum	58
Calamintha nepeta	49
Callitriche hermaphroditica	79
Callitriche truncata	18
Campanula patula	21
Cardamine impatiens	47
Cardaminopsis petraea	47
Carex appropinquata	20
Carex aquatilis	45
Carex atrata	28
Carex capillaris	70
Carex diandra	94
Carex digitata	19
Carex divisa	79
Carex elongata	22
Carex ericetorum	22
Carex humilis	22
Carex maritima	26

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<u>Species</u>	<u>No. of 10 km squares</u>
Carex montana	26
Carex paupercula	46
Carex punctata	23
Carex rupestris	20
Carex saxatilis	46
Carex vaginata	39
Carex vulpina	19
Centaureum capitatum	19
Centaureum lit torale	42
Cephalanthera longifolia	29
Cerastium alpinum	49
Cerastium arcticum subsp. arcticum	24
Cerastium cerastoides	16
Cerastium pumilum	24
Ceratophyllum submersum	38
Chenopodium botryodes	17
Chenopodium glaucum	16
Cherleria sedoides	47
Cicendia filiformis	30
Cicuta virosa	29
Cochlearia scotica	76
Corallorhiza trifida	19
Corynephorus canescens	16
Crambe maritima	88
Crassula tillaea	44
Crepis monis	18
Cuscuta europaea	36
Cyperus longus	21
Cystopteris montana	18
Dactylorhiza traunsteineri	18
Daphne mezereum	29
Dentaria bulbifera	19
Deschampsia alpina	52
Deschampsia setacea	36
Dianthus armeria	43
Dianthus deltoides	58
Draba incana	96
Draba muralis	20
Draba norvegica	18
Dryas octopetala	56
Dryopteris villarii subsp. submontana	24
Dryopteris x deweveri	49
Dryopteris x tavellii	47
Elatine hexandra	39
Eleocharis acicularis	88
Epilobium alsinifolium	81
Epilobium /amyl	65
Epipactis atrorubens	28

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<u>Species</u>	<u>No. of 10 km squares</u>
Epipactis leptochila	24
Epipactis phyllanthes	54
Equisetum x litorale	94
Equisetum pratense	70
Equisetum variegatum	89
Erodium maritimum	77
Erodium moschatum	37
Euphorbia paralias	92
Euphorbia platyphyllos	34
Euphorbia portlandica	74
Euphrasia borealis (= arctic a)	99
Euphrasia curta (= ostenfeldii)	79
Euphrasia foulaensis	58
Euphrasia frigid	51
E Euphrasia rmarshalii	24
Euphrasia montana (= rostkoviana subsp. montana)	21
Euphrasia pseudokernerii	89
Euphrasia rostkoviana	85
Fagopyrum esculentum	86
Festuca altissima	53
Festuca heterophylla	20
Festuca juncifolia	27
Festuca longifolia	41
Frankenia laevis	25
Fritillaria meleagris	22
Fumaria bastardii	35
Fumaria capreolata	62
Fumaria macrantha	24
Fumaria parviflora	42
Fumaria purpurea	50
Fumaria vaillantii	28
Gagea lutea	64
Galium parisiense	24
Galium pumilum	10
Galium sternerii	81
Gentiana pneumonanthe	38
E Gentianella anglica	36
Gentianella germanica	20
Geranium rotundifolium	91
Goodyera repens	79
Gymnocarpium robertianum	80
Hammarbya paludosa	66
Helianthemum canum	16
Helleborus foetidus	55
Herminium monorchis	40
Hippophae rhamnoides	36
Hordelymus europaeus	48
Hordeum marinum	59

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<u>Species</u>	<u>No. of 10 km squares</u>
Hornungia petraea	26
Hypericum montanum	94
Hypericum undulatum	24
Iberis amara	28
Illecebrum verticillatum	20
Impatiens noli-tangere	21
Inula crithmoides	62
Isoetes echinospora	59
Juncus acutus	25
Juncus alpinoarticulatus	19
Juncus balticus	47
Juncus biglumis	21
Juncus castaneus	23
Lathyrus aphaca	34
Lathyrus japonicus	16
Lathyrus palustris	15
Lavatera arborea	70
Limonium binervosum	70
Limonium humile	49
Limosella aquatica	16
Linnaea borealis	26
Linum anglicum	18
Lotus hispidus	35
Luronium natans	27
Luzula arcuata	16
Lycopodiella inundata	53
Lycopodium annotinum	81
Lysimachia thyrsoiflora	17
Marrubium vulgare	14
Mecanopsis cambrica	32
Medicago falcata	23
Medicago minima	22
Medicago polymorpha	43
Melampyrum cristatum	22
Melampyrum sylvaticum	28
Melittis melissophyllum	28
Mentha pulegium	43
Mertensia maritima	48
Meum athamanticum	63
Minuartia hybrida	40
Minuartia verna	77
Moenchia erecta	82
Myosotis brevifolia	32
Myosurus minimus	55
Myriophyllum verticillatum	75

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<u>Species</u>	<u>No. of 10 km squares</u>
Nardurus maritimus (= Vulpia unllateralis)	16
Nuphar pumila	19
Nymphoides peitata	27
Oenanthe fluviatilis	79
Oenanthe pimpinelloides	94
Oenanthe silaifolia	26
Ophioglossum azoricum	19
Ornithogalum pyrenaicum	22
Orchis purpurea	22
Orchis ustulata	67
Orobanche alba	31
Orobanche hederæ	64
Orobanche maritima	22
Orobanche rapum-genistæ	48
Orthilia secunda	60
Parapholis incurva	36
Papaver argernone	75
Papaver hybridum	44
Parentucellia viscosa	66
Peucedanum palustre	23
Phleum alpinum	19
Phyteuma tenerum	33
Pilularia globulifera	72
Pinus sylvestris var. scotica	38
Poa alpina	44
Poa bulbosa	23
Poa glauca	33
Poa palustris	38
Polygonatum odoratum	22
Polygonum minus	43
Polygonum mite	29
Polygonum raii	66
Polypodium australe	93
Polypogon monspeliensis	18
Polystichum x bichnellii	34
Potamogeton coloratus	42
Potamogeton compressus	46
Potamogeton filiformis	45
Potamogeton friesii	87
Potamogeton praelongus	74
Potamogeton trichoides	64
Potentilla crantzii	48
Potentilla tabernaemontani	45
Primula elatior	25
Primula farinosa	58
E Primula scotica	33
Puccinellia fasciculata	52
Puccinellia rupestris	51

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<u>Species</u>	<u>No. of 10 km squares</u>
Pulmonaria longifolia	17
Pulsatilla vulgaris	27
Pyrola media	60
Pyrola rotundifolia	41
Ranunculus arvensis	71
Ranunculus baudotii	83
Ranunculus tripartitus	28
Raphanus maritimus	89
E Rhynchosinapis monensis	18
Rhynchospora fusca	Z3
Ribes alpinum	30
Ribes spicatum	20
Rumex maritimus	83
Rumex palustris	72
Ruppia cirrhosa (= spiralis)	32
Sagina saginoides	28
Salicornia perennis	37
Salicornia pusilla	32
Salix lapponum	49
Salix myrsinites	30
Salix nigricans	74
Salix reticulata	19
Saxifraga nivalis	42
Scandix pecten-veneris	20
Scilla autumnalis	28
Scrophularia umbrosa	36
Sedum forsteranum	48
Sedum villosum	75
Senecio integrifolius	52
Sesleria caerulea	58
Sibbaldia procumbens	74
Sibthorpia europaea	59
Silene nutans	32
Sium latifolium	97
Sonchus palustris	17
Sorbus devoniensis	20
Sorbus intermedia	93
E Sorbus porrigentifformis	20
Sorbus rupicola	60
Spartina maritima	25
Stratiotes aloides	21
Suaeda fruticosa (= vera)	30
Subularia aquatica	84
Thelypteris thelypteroides	98
Thesium humifusum	73
Thlaspi alpestre	38
Tilia platyphyllos	18



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<u>Species</u>	<u>No. of 10 km squares</u>
<i>Tofieldia pusilla</i>	81
<i>Torilis arvensis</i>	16
<i>Trifolium glomeratum</i>	37
<i>Trifolium ochroleucon</i>	67
<i>Trifolium ornithopodioides</i>	85
<i>Trifolium squamosu m</i>	41
<i>Trifolium suffocatum</i>	40
<i>Vaccinium microcarpum</i>	18
<i>Valerianella carinata</i>	92
<i>Valerianella dentata</i>	65
<i>Verbascum lychnitis</i>	24
<i>Verbascum pulverulentum</i>	20
<i>Verbascum virgatum</i>	17
<i>Veronica alpina</i>	22
S <i>Veronica spicata</i> subsp. <i>hybrida</i>	18
<i>Vicia bithynica</i>	25
<i>Vicia lutea</i>	19
<i>Vicia orobus</i>	61
<i>Vicia tenuissirna</i>	24
<i>Viola lactea</i>	42
<i>Vulpia ambigua</i>	40
<i>Vulpia membranacea</i>	44
<i>Vulpia unilateralis</i> (= <i>Nardurus maritimus</i> )	16
<i>Wolffia arrhiza</i>	17
<i>Zostera angustifolia</i>	29
<i>Zostera marina</i>	74
<i>Zostera noltii</i>	43