

Suggested Plant List for Pollinators, September 2014

This list has been produced by Jan Miller on behalf of the North Wales Wildlife Trust and Marc Carlton on behalf of the Wildlife Gardening Forum, at the request of the Welsh Government's Pollinator Task Force.

The authors recognise that producing planting lists for pollinators is not a straightforward exercise. There are still many areas where further research is required in order to improve our understanding of the needs of pollinating insects and the best planting schemes to cater for them. One of the Wildlife Gardening Forum's aims is to promote more evidence-based research to increase our knowledge and understanding of this subject.

This list is based on the compilers' personal experience over many years as gardeners and naturalists, and incorporates Jan's work investigating plants for butterflies on behalf of Butterfly Conservation and uses their data sent in by members over twenty years. The list includes a selection of forage plants useful for adult butterflies, moths, hoverflies, bumblebees and solitary bees, which together make up the vast majority of pollinators in Wales. Plants recommended as larval food plants for butterflies and some moths have also been included.

Specialised lists of flowers that are recommended as forage for honeybees have been published for many years within the beekeeping community and so we have not specifically covered honeybees in our list, although many of the flowers on our list will be used by honeybees.

The list is in two parts. The first part is a list of suggested garden plants. We have only selected flowers which are garden-worthy, easily obtainable, well-known, and widely acknowledged as being attractive to pollinating insects. In some cases we have given extra comments about garden-worthiness. This is intended as a clear and concise short list to help gardeners; it is not intended to be comprehensive and we have avoided suggesting plants which are difficult to grow or obtain, or whose benefit to pollinators is still a matter for debate. We have omitted several plants that are considered to have invasive potential, and have qualified some others on the list with comments advising readers how to avoid invasive forms.

The second part is a list of wildflowers native to or naturalised in Britain that have benefits for pollinating insects. This list is particularly relevant for planting in managed field margin, hedgerow and verge meadow settings. Some of these plants are too unruly to be grown in gardens, however others make good garden plants and a few are therefore listed in both the lists. We would recommend that landowners use seed or plants of local provenance and that they seek advice from their local Wildlife Trust or similar local groups or local wildflower nurseries if they are intending to plant wildflowers on their land.

Part 1 A concise list of suggested garden plants that are attractive to pollinating insects

Ajuga reptans species and cultivars (Bugle) Early forage for bees.

Allium schoenoprasum (Chives) Attractive to a range of insects

Allium sphaerocephalon (Round-Headed Leek) Attractive to a range of insects

Angelica species (Angelica) Attractive to a range of insects, especially hoverflies and solitary bees.

Anthemis tinctoria (Yellow Chamomile) Attractive to solitary bees, and hoverflies.

*Asters** (Michaelmas Daisies). Many kinds provide forage for insects in late summer, however some are invasive and do not make good garden plants. The following are non-invasive:

Aster amellus cultivars (Starwort). Attractive to a range of insects

Aster novae-angliae cultivars. (New England Michaelmas Daisy). Attractive to a range of insects.

Aster X 'Frikartii 'Monch'. Particularly recommended for butterflies, attractive to a range of insects.

*Aubrietia** An important early nectar for insects coming out of hibernation

*Buddleja** (Butterfly Bush). Note that forms of *B. davidii* seed freely and can be invasive. They are not recommended to plant near sensitive wildlife areas. The following two hybrids do not produce seed:

Buddleja 'Lochinch'. Resembles *B. davidii*, flowering in mid-summer. Attractive to butterflies.

*Buddleja x weyeriana** 'Golden Glow'. This is a cross between *B. davidii* and *B. globosa*, late flowering. Attractive to a range of insects.

Buddleja globosa Yellow or orange ball-shaped flowers in May. Attractive to bumblebees.

Bupleurum fruticosum (Shrubby Hare's Ear). An evergreen shrub with yellow flowers attractive to a range of insects, especially solitary bees and hoverflies.

Calamintha species (Calamint) Forage for bumblebees and some solitary bees

*Calluna vulgaris** cultivars (Heather) Acid-soil loving heathers are important for late season forage. Choose single-flowered forms with visible stamens and accessible nectar; many cultivars currently sold in garden centres have flowers that are not accessible to insects.

Campanula species and cultivars (Bellflower). Forage for bumblebees and some solitary bees.

Centaurea montana (Perennial Cornflower) Forage for bumblebees and some solitary bees

*Centaurea nigra** (Black Knapweed) This wild flower can be grown in flower borders. It is very variable in the wild and ideally should be grown from seeds of local provenance. Attracts a wide range of insects.

*Cosmos bipinnatus** Single-flowered hybrids. Forage for a range of insects.

Cynara cardunculus (Cardoon, Globe Artichoke). Forage for a range of insects. A tall 'architectural' perennial.

*Dahlia** Single-flowered hybrids. Forage for a range of insects.

Dianthus barbatus (Sweet William) Nectar source for butterflies.

Digitalis purpurea (Common Foxglove) Forage for long-tongued bumblebees

Digitalis Smaller flowered species. These are forage for short-tongued bumblebees and some solitary bees.

Echinacea species and cultivars. (Purple coneflower). A late summer nectar source for most insects.

Echium plantagineum 'Blue Bedder' A smaller counterpart of Viper's Bugloss, easier to accommodate in gardens, with many vivid blue flowers all summer long that attract a range of insects.

*Echinops** species and cultivars (Globe Thistle) Attractive to a range of insects

Erica species and cultivars (Heath) Close relatives of heathers that are important forage for bees and a nectar source for butterflies. Some species are lime-tolerant.

*Eryngium** (Sea Holly, Mountain Holly) All species are attractive to a range of insects

Erysimum "Bowles Mauve"* AGM. Mauve perennial wallflower, long season nectar for butterflies, moths and many bee species.

Eupatorium ligustrinum (syn. *Ageratina ligustrina*) Mexican Hemp Agrimony. Scented patio shrub, nectar for butterflies in late summer and early autumn. (Protect from hard frost in winter).

Eupatorium purpureum and cultivars (Joe Pye Weed). A large counterpart of Hemp Agrimony from N. America, proving late nectar for butterflies, and forage for bees and other insects.

Foeniculum vulgare (Fennel). Attractive to a wide range of insects, especially hoverflies and solitary bees. The bronze-leaved form 'Purpureum' is particularly ornamental as a garden plant.

*Geranium** (Cranesbill) Single-flowered species and cultivars. Nectar source for bumblebees.

*Hebe** 'Midsummer Beauty'. Nectar for butterflies, moths and bees in mid-summer.

*Hebe** 'Great Orme'. Nectar for butterflies, moths and bees in late summer.

*Hedera helix** Ivy. An important late nectar source for various species of bees, larval food plant for Holly Blue butterfly and for several moths, plus a hibernation site for many insects. Needs space to climb in order to reach flowering size.

*Hesperis matronalis** (Dame's Violet or Sweet Rocket). Nectar source for butterflies, also larval food of Orange Tip butterfly

Humulus lupulus 'Aureus' AGM Golden Hop, a climbing foliage plant which is a larval food for Buttoned Snout moth and Comma butterfly

Ilex aquifolium Species and cultivars (Holly). Male trees produce nectar. Also a larval food plant of Holly blue butterfly.

Lavendula angustifolia* and *L. X intermedia* cultivars. (Lavender). Attractive to wide range of insects. Recent research suggests that the taller 'Old English' types provide the best forage for insects.

Linaria purpurea (Purple Toadflax). Forage for bumblebees and some solitary bees

Ligustrum ovalifolium aureum (Golden Privet). Nectar from the scented flowers is very attractive to butterflies and moths, so long as this shrub is allowed to flower before cutting.

Lamium species (Dead Nettle). All species and cultivars are forage for bumblebees and some solitary bees.

*Lunaria annua** (Honesty) Source of nectar for butterflies, also larval food plant for Orange Tip and Green-veined White

*Lythrum salicaria** (Purple Loosetrife). For boggy ground. Attractive to a range of insects.

Mahonia aquifolium. (Oregon Grape). Shrub that provide an early forage source for bees.

*Mentha** species (Mint) Attractive to a range of insects.

Nicotiana affinis cultivars. (Tobacco Plant). Annual with scented flowers attractive to Hawkmoths.

*Nepeta** species and cultivars (Catmint). Attractive to a range of insects,

Oenothera biennis, and *O. glazoviana* (Evening Primrose). Nectar for moths

Origanum vulgare* (Wild Marjoram) All forms are attractive to a range of insects.

Poppies: single flowered forms of *Papaver rhoeas*, *P.somniferum*, and *Meconopsis cambrica* are a pollen source for bumblebees and some solitary bees.

Pulmonaria species (Lungwort) Early spring nectar source for bumblebees and the solitary bee *Anthophora plumipes*.

*Pulicaria dysenterica** (Common Fleabane). For boggy areas. Similar to marigolds (*Calendula*) but more attractive to a wide range of insects.

Ribes species (Flowering and culinary Currants, and Gooseberry). Nectar for bumblebees.

Rosa Rose Single-flowered shrub roses, both species and cultivars, are a pollen source for bumblebees and some solitary bees.

Rosmarinus officinalis (Rosemary). Early spring forage for bumblebees and some solitary bees.

Rubus idaeus (Raspberry). Flowers are attractive to a range of insects.

Salix spp. (Willows) Shrubs or trees. Provide early nectar for insects, and are used as an early pollen source by queen bumblebees coming out of hibernation. Many species and cultivars grow very large, but can be coppiced. Smaller species and cultivars also provide forage for insects .

Salvia officinalis, *S. x superba*, *S. x sylvestris*, *S. nemorosa*, and cultivars. Forage for bumblebees.

Scabiousses* (*Scabiosa*, *Knautia*, *Succisia*) Species and cultivars. Forage for a range of insects, especially butterflies and bees.

*Sedum spectabile** (Ice Plant). Late summer nectar source for butterflies and bees.

*Solidago** species and hybrids. (Goldenrod). Attractive to a range of insects in late summer. Some hybrids are invasive and produce copious seed; obtain named species or cultivars from nurseries or garden centres.

Stachys species and cultivars. (Lamb's Ear, Betony; Woundwort). All are attractive to bumblebees and the Wool Carder Bee. When planting *S. byzantina* (Lamb's Ear) avoid the non-flowering forms.

Symphytum species (Comfrey). All are attractive to various species of bees, and larval food plant of Scarlet Tiger moth. *S. 'Hidcote Blue'* is early forage for bumblebees and the solitary bee *Anthophora plumipes*.

Tanacetum vulgare species and cultivars. (Tansy). Forage for solitary bees.

*Thymus** species and cultivars. (Thymes). Attractive to a range of insects.

Verbena bonariensis* AGM. Nectar source for butterflies

Verbascum species – Pollen source for bumblebees and some solitary bees. Larval Food Plant of Mullein Moth.

* – Butterfly Conservation's top butterfly nectar plants

AGM – awarded the Royal Horticultural Society 's 'Award of Garden Merit.'

Part 2

Plants native to or naturalised in Wales that are valuable for butterflies, moths, wild bees and other pollinators for field margins and verges

Achillea millefolium (Yarrow)

Alliaria petiolata (Garlic Mustard). Biennial, larval food of Orange Tip

Allium ursinum (Ramsons). Wild garlic.

Alnus glutinosa (Alder) An early season source of pollen. Will grow in damp ground.

Anthemis tinctoria (Yellow Chamomile). Nectar and Dye plant (yellow). Attractive to solitary bees, and hoverflies.

Anthyllis vulneraria (Kidney Vetch). Larval food plant for Small Blue, also nectar for Common Blue, etc.

Anthriscus sylvestris (Cow Parsley). Nectar for lacewings, beetles and hoverflies.

Cardamine pratensis (Lady's Smock or Cuckoo Flower) Food plant for Orange Tip and Green-veined White larvae. Needs boggy conditions.

*Centaurea nigra** Black Knapweed . Very variable in the wild and ideally should be grown from seeds of local provenance. Attractive to a wide range of insects.

Chamerion angustifolium (syn. *Epilobium angustifolium*) (Rosebay Willowherb) Larval food plant for Elephant Hawkmoth and nectar for many other moths.

Chelidonium majus (Greater Celandine). Nectar for bees.

Cirsium arvense (Creeping Thistle). Larval food of Painted Lady. Nectar for all insects. Note that this species is subject to the Weeds act 1959 and landowners may be required to control its spread.

Cirsium vulgare (Spear Thistle). Larval food of Painted Lady. Nectar for bees and butterflies. Note that this species is subject to the Weeds act 1959 and landowners may be required to control its spread.

Crataegus monogyna (Hawthorn). Larval food plant for many species of moth, plus important early summer nectar for some insects.

Dactylis glomerata (Cock's Foot Grass). Larval food of several species of butterflies and moths

Daucus carota (Wild Carrot, Queen Anne's Lace) Nectar for bees, lacewings, hoverflies, various beetles.

Dipsacus fullonum (Teasel) Nectar and pollen for many insects, then favourite seed heads for Goldfinches.

Echium vulgare (Viper's Bugloss). Upright spires of brilliant blue that are beloved of bees.

Eupatorium cannabinum * (Hemp Agrimony). Late summer nectar for butterflies, and forage for bees and other insects.

Festuca ovina (Sheep's Fescue). A grass; larval food for several species of Lepidoptera.

Festuca rubra (Red Fescue). A grass; larval food for several species of lepidoptera.

Filipendula ulmaria (Meadowsweet). Nectar source for various insects.

Fragaria vesca (Wild Strawberry). Food plant for Grizzled Skipper.

Frangula alnus (Alder Buckthorn). One of only two larval food plants of Brimstone larvae.

Galiopsis tetrahit (Hemp Nettle). Forage for bees.

Geranium lucidum (Shining Cranesbill). Nectar for bees and butterflies. Flowers again soon after being mown short.

Geranium molle (Dove's Foot Cranesbill). Larval food plant for some moths and butterflies, and nectar for bees and butterflies. Flowers again soon after being mown short.

Geranium pratense (Meadow Cranesbill). Blue flowers, competes well in tall grass meadow, nectar for bumblebees.

Geranium robertianum (Herb Robert). Grows in shade. Nectar source for butterflies and some bees.

*Hedera helix** Wild ivy ; important late nectar source for honeybees, larval food plant for Holly Blue and for several moths, plus important hibernation site for Brimstone butterfly and others.

Helianthemum nummularium (Common Rock Rose) - larval food plant for Brown Argus, and Silver-studded Blue. A pollen source for solitary bees.

*Hesperis matronalis** (Dame's Violet/Sweet Rocket). Larval food plant for Orange Tip.

Holcus lanatus (Yorkshire Fog) A grass; larval food of several species of butterfly.

Knautia arvensis * (Field Scabious) Forage for bees and butterflies.

Lathyrus pratensis (Meadow Vetchling) Pollen and nectar source for bumblebees and solitary bees.

Ligustrum vulgare (Native Privet) Nectar source, and larval food for many moths

Lonicera periclymenum (Honeysuckle) larval food plant for White Admiral plus many moths. Nectar attractive to hawkmoths and long-tongued bumblebees.

Lotus corniculatus (Bird's Foot Trefoil). Larval food plant for Common Blue, Dingy Skipper and several moths. also an important pollen source for bumblebees.

Lotus pedunculatus (syn. *L. uliginosus*) (Greater Bird's Foot Trefoil) Favourite nectar plant for Blues and Skippers, plus larval food for some species. Good bee forage. Likes boggy conditions

Lythrum salicaria (Purple Loosestrife). . Likes boggy conditions.

Medicago sativa (Lucerne) Larval food for the Clouded yellow, plus nectar, also a source of pollen for bumblebees.

Mentha aquatica * (Water Mint). Nectar for butterflies and bees.

*Origanum vulgare** (Wild Marjoram). Nectar for butterflies and bees.

Pentaglottis sempervirens (Green Alkanet). Very attractive to a range of bees.

Phleum pratense (Timothy). A grass; larval food for a number of Lepidoptera.

Plantago lanceolata (Ribwort Plantain). Larval food for many moths

Potentilla sterilis (Barren Strawberry). Food plant for Grizzled Skipper

Populus nigra (Black Poplar) A rare native tree, larval food for several moths.

Populus tremula (Aspen)

Prunus spinosa (Blackthorn, Sloe) Larval food for several Lepidoptera.

*Pulicaria dysenterica** (Common Fleabane). Similar to marigolds (*Calendula*) but more attractive to a wide range of insects.

Reseda luteola (Dyer's Weld). Attractive to bumblebees and the White-faced Bee (*Hylaeus signatus*)

Rhamnus catharticus (Purging Buckthorn). One of only two food plants of Brimstone larvae, also the Garden Tiger moth and others.

Rubus fruticosus *(Bramble, Blackberry). Nectar for several butterflies that don't come to garden flowers, plus larval food for many moths.

Rumex acetosella (Sheep's Sorrel). Food plant for Small Copper larvae.

Salix caprea (Goat Willow). Larval food plant for many species of moth, plus early spring nectar for bumblebees, moths, butterflies, honey bees, hover flies coming out of hibernation.

Sambucus nigra (Elder). Flowers attract hoverflies, beetles and other insects and berries good for birds.

Scabiosa columbaria * (Small Scabious). Attractive to bumblebees and some solitary bees.

Sparganium erectum (Bur-reed) Larval food for several moths. Needs damp or wet ground.

Silene dioica (Red Champion) Early forage for bumblebees

Silene nutans (Nottingham Catchfly). Nectar for moths

Stachys sylvatica (Woundwort). Forage for wool-carder bee (*Anthidium manicatum*) and bumblebees

Succisa pratensis (Devil's bit Scabious) Late summer forage for bumblebees and solitary bees and nectar for all butterflies. Food plant for Marsh Fritillary larvae

Symphytum species (Comfrey) Very attractive to all bees. Larval food plant of Scarlet Tiger Moth.

Trifolium pratense (Red Clover). High-protein pollen important for Bumblebees, as well as nectar for butterflies and larval food for many moths

Trifolium repens (White clover). Nectar and pollen for bumblebees

Tusilago farfara (Colt's Foot). One of the very earliest spring nectar flowers.

Ulmus procera (Old English Elm) Larval food for White-letter Hairstreak.

Verbascum thapsus (Great Mullein). Pollen for bees. Larval food of Mullein moth.

Vicia cracca (Tufted Vetch) Nectar for bees.

Viola riviniana (Dog Violet). Larval food plant for several rare Fritillary butterflies.

Viola palustris (Marsh Violet) Larval food for Small Pearl-bordered Fritillary.

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The Wildlife Gardening Forum is a UK-wide consortium of wildlife and horticultural organisations and individuals.