

How can we help bees and other invertebrates throughout the year

If the weather is mild the Queen early bumblebee (*Bombus pratorum*) can emerge from hibernation as early as January. She carries the next generation within her and needs to find food fast or she with her unhatched eggs will die.

When she emerges she will feed on willow, mahonia, viburnums, pulmonaria, crocuses, and once sated she will search for a suitable site to build her nest, often favouring old mouse holes. Before she can lay her eggs she needs to build herself a larder and makes an acorn sized goblet which she fills with nectar to keep her going whilst she incubates the first batch of eggs she lays, all daughters who will become the future workers. She settles down, her nectar filled goblet within easy reach, lays her eggs and incubates them. Once they have hatched and been raised she hands over housekeeping and nanny duties to her daughters and concentrates on laying eggs. A large bumble bee nest at its strongest may have as many as 600 bees in it. By as early as July the whole cycle is complete and the new generation of early Queen Bees will have hatched found mates and begun their hibernation.

As the season progresses we can help by providing lots of different opportunities for feeding.

No single plant will suit all bees as the length of the tongue varies considerably between species, so a range of flower types are needed.

Early in the season bulbs have plenty of energy stored to produce flowers quickly. Muscari, crocus species, winter aconite (*eranthis hyemalis*), scilla are all important sources of pollen with some nectar.

Trees with their vast root systems can produce enormous quantities of nectar. Early in the season willow (*Salix*) are hugely important, followed by sloe (*Prunus spinosa*), gean (*Prunus avium*), apple (*Malus*), pear (*Pyrus communis*), rowan (*Sorbus aucuparia*), hawthorn (*Crataegus monogyna*), Swedish whitebeam (*Sorbus intermedia*) to list a few, and some bigger trees like sycamore (*Acer pseudoplatanus*), horse chestnut (*Aesculus hippocastanum*), holly (*ilex aquifolium*). Recently it has been discovered that the common sycamore we so often deride as a weed tree supports as many different species as the venerable oak.

If your garden isn't large enough to support a tree there are many valuable shrubs - mahonia, berberis, cotoneaster, aralia, buckthorn (*Rhamnus cathartica*), broom (*Cystisus scoparius*), escallonia, pyracantha, fuchsia, buddleja starting with *globosa* and moving through the summer to other varieties ending with the October flowering *B. weyeriana* 'Sungold'.

There are a wealth of herbaceous perennials - agastache, asters, bergenia, borage, columbine, comfrey, eupatorium, foxgloves (perennials such as *Digitalis ferruginea*, *D.lutea* and *D. grandiflora*), geraniums, lamiums, lavender, persicaria, polemonium, pulmonaria, sea kale (*crambe maritima*).

Annuals and biennials such as cosmos, for-get-me-nots, foxgloves, mignonette, nasturtium, poppies, teasel, toadflax, vipers bugloss, veronica, verbena, wallflowers.

Herbs and vegetables left to flower are often very attractive to pollinators. A personal favourite of mine are leeks which I often transplant in winter into flower beds and allow them to flower. Their round tennis ball sized flowers attract bees over a long period and look good throughout winter. Borders left uncut until the spring can be very attractive to look at and the dead foliage insulates the soil. Garden urges can be satisfied by pruning roses and fruit trees. This is the time to try your hand at dry stone dyking - an art that is strangely addictive and makes a garden immediately look established.

Provide some undisturbed areas in the garden - under hedges, behind walls or compost bins, rough areas of grass. These can have a profoundly satisfying aesthetic contribution to make by providing contrast between neat and wilder areas. We are mostly all trying to shed a compulsion to be over tidy, but our wild creatures do need wilder spaces.

Finally, if you are buying plants from nurseries try and source from organically grown stock or nurseries who use minimal chemical interference. Bee Happy Plants, The Agroforestry Trust, Poyntzfield Herb Nursery here on the Black Isle are excellent, Walcot Nursery for fruit trees, Victoriana Nursery, Caves Folly for herbaceous perennials, the Organic Seed Catalogue, Stormy Hall all supply plants or seeds grown organically.

