



BEES, BUGS & BUTTERFLIES

**Our Garden Friends are under threat - here's the
HOW & WHY of how we can help them survive!**

Our planet depends on the three Bs - Bees, Bugs & Butterflies. As you will have heard in the news, all are under threat for a variety of reasons - here's how and why you can do your bit to help ensure their survival!

BEES

“Bumblebees are one of the most endearing insect visitors to any garden. Their furry, colourful bodies and clumsy flight always raise a smile, but they also do an essential job.”

Toby Buckland, gardener.

The numbers of bumblebees in the U.K. are declining steadily. Their natural habitat and food sources are being undermined by modern farming techniques which have reduced the once abundant wildflowers of the countryside.

It has been estimated that 97% of Britain's flower rich grasslands have been lost since the 1930s and bee populations have declined accordingly in most areas of the country.

Since the start of the 20th. century, the Cullem's Bumblebee and the Short-haired Bumblebee have become extinct in the U.K. If habitat and food sources are not increased and protected,

several other species face the same fate - in particular the Great Yellow Bumblebee and the Shril Carder Bee.

The unique value of bees to the ecosystem lies in their role as pollinators. Through this



The Great Yellow Bumblebee is facing extinction in the U.K.

activity, they play a major role in the production of the food we eat. As pollinators of commercial crops such as tomatoes, peas, strawberries and apples, bees are estimated to contribute over £400million to the U.K. economy every year!



A sparrow finds the seeds of this wildflower hard to resist, though but for the humble bee, the wildflower wouldn't be there...!

If numbers of bees and other insects continue to decline in large numbers then alternative, expensive means of pollination must be employed by farmers, ultimately raising the price of fruit and vegetables.

Bees also pollinate a huge diversity of wildflowers, enabling them to reproduce. Seeds are produced by the pollination process - these not only give life to a new generation of wildflowers, but also provide a rich food source for a variety of garden birds and insects, which would all suffer in the absence of bees.

We can all play our part in improving habitat and environment for the native bee population and reversing the recent trend of declining numbers. This does not necessitate garden innovations on a large scale - just an awareness of small steps we can take to encourage bees to take up residence!

Bees are attracted to gardens with an abundance of flowers and herbage for essential pollen & nectar, and suitable nest sites in undisturbed areas away from direct sunlight. They can see purple more clearly than any other colour, so lots of lavender, alliums, buddleia and catmint will guarantee bee visits to your garden.



Provide plants for bees in winter months as well as during the summer.

It is important to support bees throughout the seasons of the year - overwintering queens and workers will still be seeking food on warm winter days! In Spring offer bluebells, crab apple, daffodils and forget-me-nots, in Summer try comfrey, delphiniums, sweet peas and borage, in Autumn provide fuschia, dahlias, thistles and verbena and in Winter spoil your bees with wall flowers, heather, ivy and daphne!

Bees prefer secluded, quiet nest sites and, contrary to popular belief, do not enjoy interacting with, chasing or stinging humans!

In gardens, female bees seek dark cosy holes in the ground, under sheds or within shady piles of leaves - spots which are not exposed to direct sunlight for too long, as this can overheat the



Bees like to lay their eggs in hollow garden canes.

nest. You can provide nest sites for bees by stacking fallen tree branches interspersed with old garden canes - the bees use hollow cavities in which to lay their eggs.

Once laid, a food supply is added to the nest cavity by the female bee and then plugged with dead leaves or mud. The eggs will hatch in a few weeks, but the young bees will remain in this secure nest until the following Spring.

BUGS

Insects are vitally important to a healthy planet. Humans and other life forms could not survive without them and once lost, they cannot be replaced. The food we eat, the fish we catch, the birds we hear and the flowers we smell, simply would not exist without bugs - without them the world's eco systems would collapse.



Bugs are essential for plant pollination and pest control.

There are more than 40,000 invertebrate insect species in the U.K. and many of them are currently threatened by pollution and habitat loss.

The term "bugs" is a huge generalisation, encompassing some of the most fascinating creatures on the planet including ants, spiders, wasps, sawflies, house flies, lacewings, grasshoppers, earwigs, beetles midges and weevils.

Over the last 35 years, the world's bug population has fallen by 45% and in Britain our native bugs are also in decline.

Insects are essential pollinators - not just of wildflowers which provide food for birds and animals, but also of the crops on which human society depends for life.

Bugs are also natural pest controllers and decomposers - they break down rotting vegetation and wood providing nutrients for plant growth - and some beetles enrich habitat by burying small animal corpses.

By providing the right habitat, we can greatly increase the number of beneficial insects in our environment and contribute to their conservation.

Dead wood is becoming an increasingly rare habitat, due to modern well kept gardens, parks and hedgerows. It is essential for supporting centipedes, woodlice and many wood boring beetles, as well as a wide range of fungi. So, don't burn fallen branches on the bonfire - stack wood in piles in sheltered corners



of the garden to provide food and habitat for a huge variety of overwintering bugs.

Instead of tidying and burning leaves, let piles remain around the peripheries of the garden, or sweep

In a world of tidy gardens, spare a thought for the bugs - rather than burn fallen branches, leave a small pile where they can shelter...

some into a drift in the shelter of an outhouse. Bugs will quickly get to work turning this "rubbish" into nutrient rich compost!

If you are short of space in the garden, you can create temporary insect accommodation by filling tubes of chicken wire with leaves and tucking at the back of flower borders. Empty them after the leaves have rotted down in the Spring.



Dragonflies and other insects enjoy ponds or marshy habitat.

Plants with simple, flat flower heads are preferred by insects as their pollen is easy to access. Cater for bugs by planting fennel, yarrow, wild marjoram, field scabious, oxeye daisy and ornamental thistles in sunny spots.

A patch of mint or water mint around a pond will encourage one of the prettiest of bugs, the mint leaf beetle.

If you do not have space for a pond, a densely planted marshy area will provide the cool shade loved by many bugs and amphibians.



A pond encourages both bugs and amphibians alike!

For a wealth more information on bugs and thousands of other native insects, visit www.naturespot.org.uk



BUTTERFLIES

One of the most evocative sights of summer must be the graceful flitting of butterflies of myriad colours from flower to flower. Sadly, this could become just a nostalgic memory if the recent trend of decline in Britain's butterfly and moth populations continues.

Butterflies have been found fossilised in amber

a mere 200,000 years ago, and you can appreciate the truly indispensable status of butterflies within the ecosystem.

Three quarters of British butterflies are now considered to be in decline and 4 butterflies and over 60 moths have become extinct within the last 150 years - the blink of an eye in evolutionary terms.

Natural habitat has been decimated by modern farming methods and pesticide use, and air pollution is causing changes in climate and weather patterns.

All these factors spell disaster for our butterflies and moths!

Butterflies and moths are fragile insects, quick to react to environmental change and, therefore, useful indicators of biodiversity.

Butterflies first evolved around 150 million years ago! Compare this with the evolution of the first horse 55 million years ago and that of humans into their current form



A colourful butterfly emerges from its chrysalis

Areas rich in butterflies and moths are also rich in other invertebrates - all essential elements in complex food chains and essential for pollination and pest control.

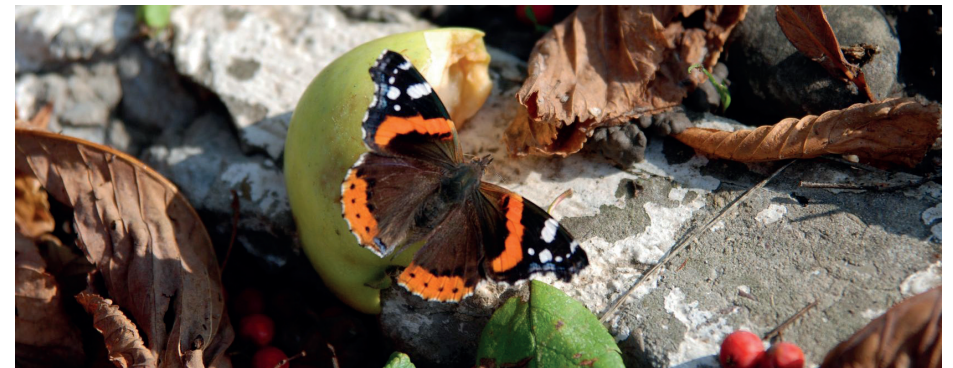
Birds, bats and other insectivores rely on butterflies and moths as an essential part of their diet - in Britain and Ireland, blue tits eat an estimated 50 billion moth caterpillars every year!

The life cycle of these valuable creatures is also unique - the journey from egg to caterpillar to chrysalis to butterfly is one of the most incredible in the natural world.

Butterflies and moths are an intrinsic element of our own life cycle and essential to the health of the planet - so it is imperative that we do all that we can to support these fragile lifeforms, if our own is to survive for many millennia to come.

The good news is, gardens can easily be transformed from human centred landscapes to butterfly friendly habitat!

Butterflies will visit gardens of any size or shape if they can feed from suitable nectar-rich plants. Nectar provides nutrients for healthy growth and energy for flight and egg laying. It is particularly important in Spring when migratory butterflies need to "refuel" after arriving in Britain from Europe or Africa.



Butterflies enjoy windfall fruit left in the garden.

A Spotter's Guide to BRITISH BUTTERFLIES



Meadow Brown
(*Maniola Jurtina*)

The Meadow Brown is the most abundant butterfly species in many habitats. Hundreds may be seen together at some sites. These butterflies even fly in dull weather where most other butterflies are inactive.



Gatekeeper
(*Pyronia Tithonus*)

As its English name suggests, the Gatekeeper butterfly is often found where clumps of flowers grow, in gateways and along hedgerows. It is often seen together with the Meadow Brown Butterfly.



Peacock
(*Aglais io*)

The Peacock Butterfly's spectacular pattern of eyespots evolved in order to startle or confuse predators. Although a familiar visitor to the garden in late summer, the Peacock's nomadic instincts take it to the countryside with its preferred habitat of woodland clearings.



Painted Lady
(*Vanessa Cardui*)

The Painted Lady is a long distance migrant. Each year it spreads northwards from the desert fringes of north Central Asia and re-colonises in mainland Europe and Britain.



White Admiral
(*Limentis camilla*)

The White Admiral is a spectacular woodland butterfly. Adults are often found nectaring on bramble flowers. It is most commonly found in southern Britain, from where it has spread rapidly since the 1920s.



Common Blue
(*Polyommatus icarus*)

The most widespread blue butterfly in the U.K. and Ireland. It can be found in a variety of grassy habitats. The brightly coloured males are more conspicuous than the females who are much more secretive.



Large White
(*Pieris Brassicae*)

The Large White is our largest white butterfly and is a strong flier. It is not always welcomed in gardens and fields due to the damage its larvae inflict on brassica crops.



Purple Emperor
(*Apatura Iris*)

This butterfly flies high in the tree tops of well wooded areas in central southern England. It feeds on aphid honeydew and sap.



Wall Brown
(*Asiommata Megera*)

The wall is named after its habitat and can be seen basking on walls, rocks and other stony places. In the hot weather, males can be seen flying low over the ground seeking females.



Swallowtail
(*Papilio Machaon*)

This is one of our rarest and most spectacular butterflies. It is currently restricted to the Norfolk Broads. Swallowtails can be seen flying over open fen vegetation and feeding on flowers such as Thistles or Ragged Robin.



Red Admiral
(*Vanessa Atalanta*)

This familiar butterfly can be seen almost anywhere in the U.K and in nearly all types of habitat. Red Admirals continue flying into October and November and are usually seen nectaring Buddleias and Flowering Ivy.

Likewise, in Autumn butterflies need to build up energy reserves for their "long haul" return journeys! - the Painted Lady butterfly's summer holiday in Britain is just one leg of a 9,000 mile migration spanning six generations of each butterfly family.

Butterflies love warmth, so choose sunny sheltered spots when planting your nectar rich plants and organise flowers in blocks, rather than as single stems.

Most open bloomed, easily accessible flowers will be popular with butterflies, but favourites include buddleia, lavender, verbena, marjoram and wallflowers.

Try to ensure that flowers bloom in succession, not all at once, providing nectar throughout the whole growing season and leave windfall fruit on the ground - butterflies love ripe apples plums and pears!

Don't disturb the caterpillars! Although they will nibble your vegetables and fruit trees, caterpillars need lots of nutrients to grow into a new generation of healthy butterflies and moths.

Finally, don't use pesticides or insecticides in the garden. These substances will kill butterflies and moths as well as ladybirds, beetles and spiders - all essential to your ecosystem!

