



# **Get Britain Buzzing: A Manifesto for Pollinators**

Buglife's 7 principles and 27 actions to arrest the alarming decline in UK pollinator populations

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*Saving the small things that run the planet*

Bees and other pollinators are essential to healthy ecosystems, their hard work fertilises flowers, creating the seeds and fruits that feed us and other animals and that sustain colour in the countryside.

It has become apparent that pollinator populations are fragile and if not cared for they can become damaged, diminished and dysfunctional.

The crops that fed our ancestors were pollinated by a rich palette of buzzing insect. Their future health is now in our hands. If we want our children and grandchildren to be able to enjoy the benefits of cities and landscapes alive with insects and flowers then we must act together now to 'Get Britain Buzzing'.

We believe that there should be sustainable populations of all pollinators; this is Buglife's 'Get Britain Buzzing' manifesto – the 7 principles that society must choose to aspire to in order to save and sustain our pollinators.

## 1. All pollinators valued for the service that they provide

People depend on pollinators, if they value and care about them then they will act to protect and sustain them.

One out of every three mouthfuls of our food depends on insect pollination. It is almost impossible to over-emphasise the importance of the service provided by pollinators. Most plants rely on insects to pollinate their flowers and so complete their reproductive cycle – they cannot set seed without being pollinated. Without bees, hoverflies and other insects visiting flowers, there would be no apples, raspberries, blackcurrants, strawberries, pears, almonds, elderberries, cherries, blackberries.... and very few flowers in our gardens and countryside.

It is estimated that 84% of EU crops (valued at £12.6 billion per year) and 80% of wildflowers rely on insect pollination. Yet pollinators have been taken for granted and until recently it was expected that they would always be there to carry out their free services. Collapses in pollinator populations in China and parts of the United States have had big economic impacts and if current trends continue, we will not have enough British wild pollinators (in terms of both numbers and variety) for all the crops our growing population requires. That is a truly frightening prospect. Wild pollinators in the UK include bumblebees and other bees (250 species), butterflies and moths (2600 species), flies (7010) and various other insects such as beetles, wasps and thrips. Coordinated action and education are necessary to underpin the required changes.

Governments and local authorities should develop and implement pollinator action plans.

Pollination and pollinator conservation should be incorporated in primary school education.

## 2. Our pollinator populations properly monitored and understood

Knowledge is key to people being able to take effective action to protect and sustain pollinator populations.

Pollinators are a highly diverse group of insects that are subject to variable levels of recording, monitoring and popularity. Some have national recording schemes (e.g. butterflies, moths, bees and hoverflies), and some are served by good species identification resources (e.g. butterflies, moths, hoverflies, bumblebees).

served by good species identification resources (e.g. butterflies, moths, hoverflies, bumblebees). But many key pollinator groups are not well recorded or monitored and identification resources are either unavailable or difficult to use. The design of monitoring schemes is critical to the type and quality of data collected, and the right sort of monitoring will provide sound information for gauging how pollinators are faring, and/or determining what we can do to protect and enhance their populations in different parts of Britain. We must keep track of pollinator populations, just as we would track any other key environmental or economic asset.

A centrally co-ordinated, administered and funded, long-term, scientifically robust pollinator monitoring programme, implemented throughout the UK is required; species level abundance data would be ideal, but gathering abundance data across a wide range of pollinator groups is the initial priority.

We know that wildflower loss and pesticide use are major factors working in conjunction to cause declines. However, there remain significant gaps in knowledge and understanding about what aspects of these factors are most significant and which habitats and habitat features are crucial for maintaining and restoring pollinator populations (particularly pollinators with free living larvae). In addition the impacts of emerging factors such as imported diseases and invasive species are poorly understood. There is a strong focus on honeybee science, but honeybees are not typical pollinators. There is inadequate study of bumblebees, moths and hoverflies and almost no study of solitary bees, other flies and beetles. In addition, little work is done on wildflower pollination. Despite some focus on crop pollination we still don't have accurate estimates of the comparative importance of different groups of pollinators.

A better understanding of pollinator ecology and the causes of decline will enable the design and implementation of cost effective remediation measures.

Increased research efforts targeted at understanding pollinator ecology and declines and findings translated into policy messages and practical action on the ground

### 3. Pesticide use that harms pollinators reduced

Pesticides can be useful tools in helping us to produce large quantities of food cheaply. By improving pre-approval testing and being much more careful and prudent about their use we can avoid the damage they can cause to agricultural ecosystems and wildlife.

Currently there are over four hundred active substances approved for use as a pesticide protection product in the EU. Since the approval process started in 1991, over a hundred have been banned due to their detrimental effect on the environment or human health. This indicates that the current testing procedure for approval is inadequate, again demonstrated by the recent neonicotinoid pesticide ban.

There are numerous issues surrounding the testing procedure:

- higher level field studies are only undertaken on honeybees, that do not reflect the sensitivity levels of other non-target organisms;
- acute toxicity tests only take place on around seven sentinel species;
- the 'cocktail effect' of pesticides in combination with each other is not taken into account;
- independent studies that show detrimental effects are not taken into consideration quickly enough after the chemical has been approved;
- when environmental impacts of pesticides are called into question there is too much emphasis on proving harm, rather than the onus being on the chemical companies to prove that they are safe;
- pre-approval studies are often wrapped up in commercial secrecy that does not allow for independent analysis; and
- regulatory studies do not use tests of statistical significance so are not scientifically robust.

Robustness of the EU pesticide approval 'test method' for pollinators must be improved and use a stronger evidence base for a wider range of pollinator species.

The UK must initiate a full assessment of the environmental risks posed by neonicotinoid pesticides, including to bumblebees, solitary bees, hoverflies and moths, but also through soil residues and in aquatic habitats, as part of a review of pesticide uses; the assessment must adhere to the precautionary principle.

In February 2013, the Government published the UK National Action Plan for Pesticide Use to fulfil a requirement under the EU directive on the sustainable use of pesticides. The plan lacks ambition and fails to set out a clear direction for achieving sustainable use of pesticides and preventing damage to pollinator populations. Implementing pollinator focused initiatives could achieve real change for pollinators, with clear and coordinated action, and better developed Integrated Pest Management (IPM). Currently there is great disparity in the interpretation of IPM amongst stakeholders, as well as their understanding of its capacity to deliver reductions in pesticide use and wider benefits through habitat creation to encourage natural pest control and to benefit pollinator populations.

Integrated Pest Management (IPM) should be further developed, and implemented effectively.

Develop pollinator-friendly pesticides strategies that focus on effective action to reduce the impacts of pesticides on a wide range of pollinators.

The sale of pesticides to farmers is often commission based, with the middleman getting paid by the pesticide company on the basis of the volume of pesticide sold. Such systems of financial reward introduce a bias against the interests of the customer. Commission based selling is not allowed in the National Health Service and was banned in the financial service industry in early 2013.

Farmers should be able to trust agronomists to provide independent advice that has their best interests at heart.

Commission based selling of pesticides should be banned.

Cities, boroughs and counties often have very significant nursery, planting and land maintenance operations. Local authorities can use significant volumes of pesticides, but this is not necessary, for instance Paris is now pesticide free.

Local Authorities should consider going completely pesticide free, and at least stop using pesticides for vanity or cosmetic landscape use, particularly in schools, parks and other public areas.

Most insect pollination of crops and wildflowers is done by wild bumblebees and solitary bee species. Most people love and respect bees for their own beauty and important ecological role. Unfortunately a minority of people deliberately or recklessly destroy or damage bee nests and nesting bees with pesticides.

Currently 11 pesticide products are approved for destroying bee nests, but the destruction of bee nests with pesticides does not yet require a licence. It is important that in our heavily managed environment there is space for wild bees to nest safely.

Wild bird nests are protected by law, but wild bee nests are completely unprotected, they should not be recklessly destroyed with pesticides or poisons.

A law introduced preventing the un-licensed destruction of nesting wild bees or their nests with pesticides or poisons.

#### 4. Wildflower rich landscapes restored - B-Lines established

Wildflower rich landscapes and the vibrant populations of bees and other wildlife that they support are fantastic for people – our lives, and our descendants lives, will be richer if there are more such places in the countryside.

Agricultural intensification in our countryside, in conjunction with loss of land to urban development, has resulted in a decline of wildflower-rich habitats – 97% of wildflower-rich grasslands have gone since the 1930s.

Many areas of wildflower-rich habitat now exist as small patches often isolated from each other by large expanses of less wildlife-friendly habitat. This fragmentation leaves populations of insect pollinators marooned and unable to move in response to environmental change, such as climate change.

Agri-environmental measures have been slow at reversing these declines in habitat extent and much of the action that has been taken has been diffused across the countryside and not targeted in a structured or cost effective manner.

Large areas of wildflower-rich habitat mosaics must be restored and created at a landscape scale to provide essential food and shelter for pollinators.

B-Lines are a proven method of creating local authority buy in to an ecologically coherent network of wildflower habitats. A network of lines is mapped at a county level, joining existing and proposed wildlife rich areas. Fields are restored along each 3km wide line. When 10% of a line is wildflower rich the B-Line enables pollinators and other wildlife to thrive and disperse. This is the most cost effective approach to restoring grassland biodiversity and engaging local communities in agricultural improvement.

Remaining areas of wild flowers and existing High Nature Value agriculture must be maintained and promoted.

Habitat-linking corridors, such as B-Lines, must be identified and integrated into existing schemes and policies to target habitat creation and increase opportunities for species to move around the countryside.

Agri-environment schemes should have adequately funded pollinator habitat options and these should be targeted, using high quality spatial data, to deliver habitat for priority pollinator species.

Plants that are sometimes considered to be weeds can actually be very important for sustaining populations of pollinators; this should be contemplated carefully when considering action to control such plants.

Spear thistle, Creeping thistle and Common ragwort are important for a large number of pollinator species. For example, at least 77 invertebrate species have been recorded eating Ragwort leaves, or living in its stems and flowers. More importantly, 30 species are entirely dependant on Ragwort. Ragwort is also an important nectar source for over one hundred species of butterflies, bees, moths, flies and other invertebrates, helping to maintain insect populations generally in the UK countryside.

There is legislation that allows for the control of these species by the issuing of a formal order; however it is not illegal for these species to grow on land. In some circumstances controlling the spread of these species is required to ensure safe, healthy pasture or hay meadow management, but the extent and severity of control should be proportionate to the risk. Unfortunately the legislation is often over zealously interpreted, regularly at great expense to the tax payer or land owner, resulting in large areas being cleared of these important species, to the detriment of local pollinator populations.

Clear guidance provided to land managers so that they appreciate the importance to pollinators of species such as ragwort and thistles

The Weeds Act 1959 and Ragwort Control Act 2003 are red tape that damage biodiversity and have a net negative economic effect - they should be repealed.

## 5. Declines in rare and threatened pollinator species reversed

Resilient ecosystems are rich in species and the future value of a pollinator species may be much greater than we can predict now. A stitch in time saves nine so it makes sense to halt declines now so that extinctions are prevented.

The recent State of Nature report revealed that 60% of the species studied have declined over recent decades. More than one in ten of all the species assessed are under threat of disappearing from our shores altogether. Invertebrates are suffering the greatest declines, particularly bees, moths, butterflies, ladybirds and ground beetles: these groups of insects have all declined between 65-70% over recent decades. Many invertebrates are highly threatened - half of our 27 bumblebee species are in decline and three of these bumblebee species have already gone extinct; two-thirds of our moths and 71% of our butterflies are in long term decline. The Short-haired bumblebee and Essex emerald moth are two that we have lost in recent decades from the UK. Across Europe 38% of bee and hoverfly species are in decline; only 12% are increasing. Many of these species are already listed on Red Lists and the most endangered are protected by the Natural Environment and Rural Communities Act 2006 and the Nature Conservation (Scotland) Act 2004. However, current activity to conserve these species is insufficient to reverse declines.

The invertebrate declines we are witnessing are significantly greater than those observed in birds and mammals. Invertebrates are the very heart of our ecosystems. They provide an excellent indicator of the health of our environment and underpin essential services. The State of Nature report shows that most species of pollinator are in decline. Buglife is concerned that these declines are already impacting on the UK's ability to grow food and crops.

Efforts to conserve rare and threatened pollinator species, particularly those on the national biodiversity lists should be a clear and prioritised cross departmental government priority.

New funding should be made available to conserve rare and threatened pollinator species.



## 6. Places for pollinators planned around people

Local authorities, businesses and individuals can all take action that will help the recovery of pollinator populations and bring back wildlife into towns and cities.

Our spatial planning system could be significantly more pollinator-friendly.

Local plans should direct development away from existing flower rich habitats and should also indicate where flower rich habitats will be restored or created in the future – for instance a map of B-Lines.

The inclusion of flower rich green infrastructure such as green roofs, living walls and rain gardens in development proposals provide stepping stones for pollinator species, allowing them to move and disperse to urban greenspace and the wider landscape.

Local and national planning guidance should be clear that developments are expected to incorporate pollinator friendly green infrastructure.

Brownfields can support a huge diversity of wildlife, often providing refuges for pollinators that have suffered population crashes. Brownfields can include quarries, disused railways lines, spoil heaps, and even former industrial estates that have been allowed to develop into urban havens for wildlife. Often these are the only wildlife-rich areas left in our towns and cities. However, development pressure is threatening the future of many key sites.

Brownfield sites of high environmental quality should be identified in the local plan, protected from development and managed to ensure that they continue to provide suitable habitat for pollinators

Quarries and gravel workings can offer major opportunities to boost pollinator levels both in their active phases (by allowing worked out areas to develop flower-rich conditions) and through careful restoration. The Aggregates Levy Sustainability Fund was established to channel this tax back into environmental benefits. This fund was recently absorbed into Treasury funds, damaging wildlife conservation efforts. The Aggregates Levy Sustainability Fund should be re-instated to enable more pollinator conservation activity on and near mineral extraction sites.

Mineral planning should consider the role that active and restored excavation features can play in promoting pollinator levels and biodiversity in general, and find ways of avoiding restoration to species-poor habitat.

The Aggregates Levy Sustainability Fund should be re-instated and directed towards restoring and creating wildflower areas.

Urban greenspace can include a wide variety of land uses including publicly managed green spaces such as parks, cemeteries, communal ground in residential areas, school grounds, and road verges; privately managed green spaces such as private gardens, golf courses, landscaped areas in business parks, hospitals and company premises; and areas of semi-natural habitat such as brownfield sites, river banks and railway lines. There are good examples of public greenspace being managed for wildflowers and pollinators, but this is not yet the norm.

Management of public open space must provide more shelter and nesting areas for pollinators.

Wildflowers and pollinator-friendly formal planting and management should be the norm in urban greenspace.

Individuals, families and businesses can all help bees and other pollinators by planting pollen and nectar rich flowers, maintaining areas of wildflowers and shrubs, encouraging solitary and bumblebees to nest in bare ground, dead wood or bundles of tubes and avoiding using insecticides.

Everyone providing and maintaining more places for pollinators to feed and breed.

## 7. Wild pollinators protected from imported parasites and diseases

Why risk importing deadly diseases when establishing a locally produced source of commercial pollinators would be good for our economy and our ecosystems?

Over 40,000 bumblebee colonies are imported into the UK each year to assist with the pollination of crops such as tomatoes and soft fruit. There is growing evidence that imported bees can spread disease to indigenous bees, causing catastrophic crashes of their populations - this has already happened to wild American bumblebees and several times in domesticated Honeybees. Commercial bumblebee importers claim that their stock is disease-free, but a recent published study by the University of Sussex has shown this to be incorrect. Increasing international trade in diseased bees is a disaster waiting to happen. The use of foreign bees is usually driven by commercial expediency and it would be a wise precaution to replace this importation trade with trade in home bred indigenous bees.

The importation of bumblebees and other pollinators for crop pollination should be stopped, in favour of the use of locally produced, naturally occurring pollinators.



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