Irish Examiner

How you can save the bees

Friday, May 17, 2019

Decline in our bees

Since the 1980s, due to landscape changes, half of our wild bee species has undergone huge declines. One third of our 98 wild bee species are now threatened with extinction in Ireland. Bees are declining because we have drastically reduced the areas where they can nest and the amount of food (wildflowers) our landscape provides for them. We also subject them to levels of pesticides that make it difficult for them to complete their life cycles.

What can we do to help?

If we want bees to be available to pollinate our crops and wild plants for future generations, we need to manage the landscape in a more sustainable way and create a joined-up network of diverse and flower-rich habitats. This requires all of us to help - from farmers to local authorities, to schools, gardeners and local businesses.

All-Ireland Pollinator Plan

The All-Ireland Pollinator Plan was launched in 2015 and is supported by over 90 governmental and non-governmental organisations, North and South, who have pledged to deliver 81 actions to make the island more pollinator friendly. The All-Ireland Pollinator Plan is implemented by the National Biodiversity Data Centre. The Heritage Council and Bord Bia co-fund a Project Officer position to help coordinate the plan. At its core, the Pollinator Plan is all about making the landscape a place where pollinators can survive and thrive. Specific guidelines for each sector – Councils, farmland, schools, local communities and businesses - have been published to provide evidence-based actions that will help reverse bee declines. It is also good to know that the actions suggested through the Pollinator Plan will have a positive impact on all our biodiversity in general.

There are lots of free resources and toolkits to help bees available to download from www.pollinators.ie

This booklet explain how gardeners, local communities and schools can lead the way in making Ireland more pollinator friendly.

National Biodiversity Data Centre
Documenting Ireland's Wildlife

Edited by Juanita Browne

Why do we need to help our pollinators?

Farmers

Farmers who grow pollinator-dependent crops, such as apples, strawberries or oil seed rape, need pollinators to ensure reliable yields of high-quality produce. Without pollinating insects, the livelihoods of farmers will be impacted. For consumers, this means it would be more difficult to buy local produce at an affordable price.

Gardeners

We need a wide range of pollinator-dependent fruit and vegetables to have a healthy diet. Until now we have had the option of growing our own fruits and vegetables to feed ourselves and our families if we wish. Without pollinators this ability could be lost to us and to future generations.

Environment

Pollinators play a key role in our natural environment. 78% of all our wild plants require insect pollination. Without these wildflowers and flowering trees and hedgerows, the Irish landscape, cherished by us and crucial to our tourism sector, would be a much less beautiful and colourful place. These plants provide food and shelter for our birds and mammals, as well as habitats for other animal populations, including many beneficial insects that control crop pests.

"Protect pollinators so that you can grow your own fruit and vegetables, shop for local produce and have flowers and wildlife in your local landscape"

While other insects play a role, most pollination of crops and wild plants on the island of Ireland is carried out by bees.

Who are the pollinators in Ireland?

There are 99 different species (types) of bees in Ireland. We have one honeybee, 21 different bumblebees and 77 different solitary bees. Bumblebees and solitary bees are known as wild pollinators. Research tells us that if we want our crops and wild plants to be pollinated, we need an abundance and diversity of wild pollinators as well as healthy honeybees.

"Protect pollinators so that you can grow you own fruit and vegetables, shop for local produce and have flowers and wildlife in your local landscape"

Did you know?

Unless you threaten them, bees will not attack humans. They are only interested in gathering nectar and pollen to feed themselves and their families. If a bee comes close to you just sit still and it will fly off when it realises you're not a flower!

Solitary bees

can be very efficient pollinators. One Red Mason solitary bee can do the work of between 120-160 honeybees.

Honeybee

Honeybees live in hives and are managed and cared for by beekeepers. Beekeepers make sure the honeybees are healthy and have enough to eat, especially over the winter months. Honeybees are the only hype of bees in Ireland who make honey.

Bumblebees

Bumblebees have fat, furry bodies. They are very important pollinators of crops like strawberries and tomatoes. Bumblebees make their nests on the ground, hidden in long grass or other vegetation. Like honeybees, bumblebees live in a colony with a queen, female workers and males.

Queen bumblebees hibernate over winter and emerge in spring to begin their colony. To survive, it is vital that bumblebees have food from spring through to autumn. In late summer-autumn, mated new queens need to fatten up before going into hibernation, while all the other bumblebees, including the old queen, die off.

Solitary bees

Solitary bees nest in tiny burrows that they make in bare soil or in existing cavities, such as holes in wood or hollow stems. Solitary bees exist as a single male and female. They emerge from hibernation in spring and make a nest. After mating, the female lays fertilised eggs and leaves a food supply of pollen beside each one. When this job is done, the females and males die. The eggs hatch and the larvae eat the food supply left by the parent before overwintering in a cocoon to emerge the following spring.

Most solitary bees in Ireland are mining bees who nest in south or east facing slopes of bare earth (soil, sand, clary, peat)

How your local community can help

TO help pollinators we need to ensure that they have food, shelter and safety from chemicals. The actions suggested will provide this in your local community. The more of these actions you can take the better. Many pollinator friendly actions simply require us to manage the land in a different way than we have become used to.

It is not about letting the landscape go wild, but about managing it in a more sustainable way so that pollinators can survive and continue to provide us with their vital service.

We have suggested actions that are not costly and in some instances may lead to cost savings. Multiple actions are suggested so that you can consider your own local community and decide which actions would work best and at which location.

In all cases, public health and safety should be the key consideration.

A) Identify and protect existing areas that are good for pollinators

Most local communities will already have some areas that are very good for pollinators and are acting as refuges in an otherwise inhospitable landscape. The most important thing you can do is to recognise and protect these sites.

Hedgerows: Our native hedgerows are very important to pollinators and other wildlife. While roadside hedgerows may have to be cut back for traffic safety, off-road hedgerows should be allowed to flower to help pollinators and other wildlife.

B) Reduce the frequency of mowing of grassy areas

If you have areas of grass, reducing the frequency of mowing allows common wildflowers such as clovers, knapweed and bird's-foot-trefoil to naturally grow amongst the long grass. This is the most cost-effective way to provide food for pollinators and other insects.

If we could learn to love Dandelions and see them as a welcome splash of colour many more of our pollinators would survive spring.

FOLENS EXPLORERS SESE

How bee friendly is your local area?

Tick the bee friendly things you see in your garden, school or park.
Add one other thing you see that is bee friendly.

meadow

long grass

hedgerow

dandelions

clover

herbs

bare soil

nest boxes

_____

What could you do to make your local area more bee friendly?

Teachers – find out more about bees and the local natural environment in Folens *Explorers* at FolensOnline.ie

Providing food, shelter and safety

C) Pollinator-friendly planting

Traditionally, a lot of deliberate planting in public spaces has been with annuals, such as begonia, primula or busy lizzie. Unfortunately, these are not good sources of pollen or nectar (as they have been bred to be very 'showy') and do not provide food for bees and other insects. There are many other plants that can look similarly attractive but will also support our pollinators. There are losts of pollinator-friendly plant lists to be found on www.pollinators.ie

D) Provide wild pollinator nesting habitat: hedgerows, earth banks and hotels

Nesting habitat for wild bees (bumblebees and solitary bees) is unobtrusive and easy to create. Wild bees live in small colonies and are entirely focussed on finding enough pollen and nectar to feed themselves and their offspring. They are not aggressive, have no interest in interacting with humans, and do not present any risk to the public. Bumblebees nest in long grass, often at the base of a hedgerow, so this is very easy shelter to provide.

We have 62 species (types) of solitary bees who are mining bees. They nest by burrowing into bare ground or south/east facing banks of bare earth (soil, sand, clay, peat). The remaining 15 solitary bee species are cavity-nesting bees who nest in south/east facing stone walls, masonry, wooden structures or commercially available bee nest boxes. Areas where these actions might apply in a local community are: existing hedgerows with bare earth at base, roadsides, verges, community buildings, housing estates, riverbanks, any free common land where bee hotels could be kept (avoid popular areas that may be prone to vandalism).

E) Reduce the use of pesticides

In some cases, the use of pesticides (insecticides, fungicides, herbicides) is necessary, e.g. the use of herbicides along railway tracks to ensure the health and safety of train passengers. In other cases, we have fallen into a pattern of using them as a way of 'tidying' or sanitising our local areas.

To minimise negative impacts on pollinators, it is important that pesticides are used sustainably. This means they should only be used when necessary, and efforts should be made to minimise their impact on non-target species like bees. Pesticides should always be applied exactly according to manufacturer guidelines.

SuperValu TidyTowns

Caring for our environment

Ireland's most effective **sustainability initiative**

Get Involved

Volunteer with your local TidyTowns committee today, visit www.SuperValu.ie

SuperValu
Real Food, Real People

Brought to you by The Department of Rural and Community Development

Rialtas na hÉireann
Government of Ireland

Native wild flowers for pollinators

Pollinators need flowers to feed on from spring through to autumn

Native trees & shrubs – *allow hedgerows to flower*

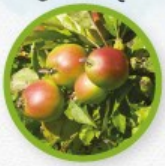
Willow

Blackthorn

Whitethorn/Hawthorn

Wild cherry

Crab apple



Rowan

Spindle

Bramble

Wild roses

Ivy

Native wildflowers

Dandelion

Dead nettles

Hogweed

Vetches

Oxeye Daisy

Selfheal

Bird's-foot-trefoil

Clover

Devil's-Bit-Scabious

Knapweed

Creating a bee-friendly village

Pat Foley, Geashill Tidy Towns, explains how they transformed their village into an oasis for pollinators

In 2016, the Local Authority Pollinator Award was launched as part of the TidyTowns competition, but what had we ever done for pollinators, regardless of what pollinators might have done for us?

We pored over the excellent All-Ireland Pollinator Plan brochures. There was so much to learn and even more to unlearn. Those dreaded dandelions we had cheerfully poisoned or decapitated over the years were now our friends. They should be protected from 'sprayer and mower' alike, so that early emerging bumblebees could feed on them. Bramble and thistle affectionately referred to as 'dirt' in these parts were now more prized than the japanese acer or the now totally uncool double rose.

We had already began planting trees and developing areas for wildlife, but once we committed to entering the Pollinator Award competition, we began to focus directly on pollinator-friendly planting, establishing a wildflower wetland area. We also created two perennial garden areas, right in the heart of the village. We organised an art competition and window display in Geashill National School, with biodiversity as its theme, and lots more. We changed our flower beds away from so-called 'begonia bliss' toward bee, bird and butterfly-friendly planting. We planted over 300 metres of mixed native hedge of 24 varieties. We were advised to provide nesting habitats for insects - so with the help of the children of Geashill National School and the Killeigh and Geashill Boys Brigade, we constructed two insect hotels.

Ivy - long believed to be hell-bent on strangling innocent trees and maliciously tearing down walls - is now cherished because it produces so much pollen and nectar for bees in the autumn months. Even the nettle - whose evil sting was best cured with the swipe of a billhook or in more recent times a good dose of a strimmer - now had pollinator-friendly status.

Had the gardening world gone mad? No, the opposite in fact. We know now that in just three decades, flying insect populations in German nature reserves have plummeted by more than 75%. This brings to mind the windscreen

Those dreaded dandelions we had cheerfully poisoned or decapitated over the years were now our friends.

phenomenon - how long has it been since we last had to squeegee crushed insects from the front window and lights of our cars?
The moth snowstorm is no more - gone the way of the clouds of crows and gulls that used to follow the plough. We are slowly becoming aware of the impact of our high yield, short-term economic actions as well as a preference for a 'clean and tidy' aesthetic on our shared habitat and the effects this has on our biodiversity.
The most important thing we learned was how little we knew or understood about the plight of pollinators, but how their decline could be addressed and reversed.
In 2017, we had lots more bee-friendly planting underway and a new 600 sq. m. wildflower area sown. We could now - with the help of our swatches from the National Biodiversity Data Centre - identify our butterflies with more confidence, even those confusing 'whites'! The bumblebees were still tricky, but now we know that you can always send a photo on to Tomás Murray in the National Biodiversity Data Centre for identification.

It was really thrilling for us when the invitation to the awards ceremony in the Helix arrived. We had made the last eight - which in itself was recognition that our work on behalf of Pollinators had been given the stamp of approval. Being announced the overall winner in 2017 and regional winner in 2018 was the proverbial icing on the cake. The excitement of the win has encouraged us to redouble our efforts on the job at hand.
We follow the example of the bees themselves; mobilising large numbers to work together; tirelessly repeating positive actions whether big or small – countle ss times for the good of all.

Wildflowers at Geashill National School

What does a pollinator friendly garden look like?

Safety

Shelter

Food

For gardens to be good for pollinators, they need to provide food in the form of flowers, shelter for nesting and safety from chemicals.

Shelter: Solitary bee nest boxes

Safety: Manual weeding instead of pesticide use

Shelter: Areas of long grass for bumblebee nesting

Food: Flowering hedgerows, shrubs or trees

Food: Flowering hedgerows surrounding property

Food: Dandelions and clover blooming in strips or patches of long grass

Food: Pollinator friendly window boxes/hanging baskets/potted herbs

Shelter: Earth banks/ bare soil/ dry stone walls for solitary bee nesting

Janssen Sciences Ireland

Until recently, Janssen Sciences Ireland's main Biodiversity Management Program was for the Irish Hare, which is a protected Irish species of the arctic hare. The site landscaping and lawns are managed with the hares in mind and they have been a key consideration during construction, which started in October 2017, to expand the plant at Ringaskiddy.

It was a priority for Janssen to minimise the impact of the construction on the hares and their habitat. As the construction winds down in 2019, Janssen has already started to plant trees, shrubs and flowers to re-instate the landscaping.

In addition to the hares, the Ringaskiddy site is home to many other species including the red fox, kestrel and long eared owl. Janssen recently installed bird boxes along the Slí na Sláinte walk-way which is very popular with staff.

In March 2019, as part of its ongoing commitment to the All-Ireland Pollinator Plan, and with assistance from the National Bio Diversity Data Centre, Janssen established an apiary on site to increase bee numbers.

Department of Agriculture Food and the Marine (DAFM) pollinator actions and support

Pollinators play a critically important role to agriculture and to our agricultural landscape and DAFM has taken a proactive approach to its involvement in the protection of our pollinators. In recent years the rise in public awareness of our pollinators is a welcome development, with much credit going to the All-Ireland-Pollinator-Plan.

DAFM provides support for wider biodiversity and the environment through a wide range of policies, controls and funding streams including research and agri-environmental schemes. The current Green Low Carbon Agri-environmental Scheme (GLAS) has approximately 50,000 farmers and provides a wide range of biodiversity measures which protect our wildlife and habitats, including pollinators.

DAFM pollinator Network

In 2017, an internal working group, the DAFM Pollinator Network, was established to promote the protection of Ireland's pollinating insect species. The network is designed to connect DAFM with other Departments and agencies, researchers, stakeholders, the farming community and the general public to:

- Provide a platform for the internal and external sharing of knowledge and expertise
- Provide input into the design, development, and communication of agricultural policies strategies, and schemes in relation to pollinators.
- Provide guidance and support and collaborate with researchers and institutions to better target research and innovation activities.
- Facilitate communication, engagement and outreach activities with the agricultural and environmental community and the public.

All Ireland Pollinator Plan (AIPP)

DAFM is a members of the AIPP steering committee and work together with the National Biodiversity Data Centre and other agencies and researchers by supporting the development and implementation of the actions of the All-Ireland Pollinator Plan 2015-2020. DAFM provide funding of €15,000 annually to the AIPP. This funding has allowed for the publication of the very successful series of guidelines on pollinator actions, including the 'farmland: actions to help pollinators' on which DAFM worked closely with the National Biodiversity Data Centre. The guidelines explain five evidence-based actions to make farmland more pollinator friendly.

European Innovation Partnership (EIP) Protecting Farmland Pollinators

As part of the EIP funding stream under the Rural Development Programme, DAFM awarded €1,194,697 to the Protecting Farmland Pollinators EIP. This project began in 2019 and is led by the National Biodiversity Data Centre. The project aims to develop a flexible mechanism that encourages all farmers to make their whole-farm more pollinator friendly in a way that is measurable and will not impact productivity. Many other

eip-agri
AGRICULTURE & INNOVATION


Minister of State Andrew Doyle, World Bee Day 2018

of the EIP projects supports wider biodiversity on farmland habitats and will have benefits for our vulnerable habitats and species including pollinators.

World Bee Day

To mark World Bee Day 2018, on the 17th of May, Minister of State Andrew Doyle launched the DAFM's beehive initiative at Backweston with Jim Donohue (Master Beekeeper). This initiative helped contribute to the All-Ireland Pollinator Plan (2015-2020), promote DAFM's role with regard to the Irish beekeeping sector and helped raise awareness of pollinators and beekeeping within the campus. The first edition of the DAFM Pollinator Network newsletter was also released.

For World Bee Day 2019, the DAFM Pollinator Network will mark the occasion through a range of activities including hosting an information and education seminar with expert speakers as well as holding a photo competition. The aim is to raise awareness while also encouraging active involvement and engagement across the organisation as a whole. In addition, the network will be releasing the second edition of their newsletter, providing an update of DAFM's activities that support bees and other pollinators and on the Backweston honeybee hive.

The National Apiculture Programme and Honey Bees

The National Apiculture Programme is co-funded by the European Commission and DAFM. The current programme commenced in 2016 and runs to July 2019 providing annual funding of €72,000 towards a research project aimed at improving overall honeybee health in Ireland. Work on the programme is conducted by University of Limerick working in association with Teagasc Oakpark.

Establishment of New Native Woodlands

Native woodlands are a special ecosystem, where flower resources are multi-layered. Trees rich in nectar and pollen like cherry and holly provide flowers in the upper story zones, hawthorn, whitethorn, crab apple, provide lower story resources. In 2018 DAFM funded the planting of over 1 million native trees, an increase of 30% on the previous year. A new woodland environmental fund was also established in 2018 by DAFM which aims to bring additional finance from the business community to the establishment of these important habitats for pollinators.

BEES are good for you

All-Ireland Pollinator Plan co-founder and Project Coordinator, **Dr Úna FitzPatrick** *explains how she welcomes the bees that visit her garden*

Bee on Lavender, a pollen-rich choice for your garden.

Having bumblebees visit my garden improves my health. They pollinate the vegetables and fruit I grow, but it's much more than that. There is a tranquility to sitting on a summer's evening watching bumblebees flitting from flower to flower, collecting pollen to bring back to feed their young. I think many of us know it instinctively, but more and more scientific studies are now showing that spending time in nature is good for us, both physically and mentally.

I have a small urban garden geared towards two boys and the sports they play. Having bumblebees come to visit doesn't need a 'wild' garden, nor does it need a large garden or much effort. Containers on the patio or a window box will do it.

Queen bumblebees emerge from hibernation in the spring when the temperature begins to rise. For me, it's a true sign that winter is finally over. Most of those queens have spent the winter burrowed underground, often in north-facing slopes to avoid the winter sun - in case they think it is spring too soon. They avoid freezing to death by producing glycerol, which acts as antifreeze, and prevents the water in their bodies from turning into ice crystals.

Bees are our most important insect pollinator because they visit flowers to collect pollen to feed to their young, as well as feeding exclusively on the nectar of flowers as adults. Their entire life-cycle is dependent on interactions with flowering plants.

The queen's first task, on emerging from hibernation, is to find a nest site and then to collect pollen to feed the first batch of young. Almost all of the 21 different types of bumblebees we have in Ireland make their nest on the surface of the ground or just underneath. Undisturbed long grass or the longer grass at the base of a hedgerow are perfect sites.

Nature is amazingly interconnected, and here it's the pollen the queen collects that will stimulate her ovaries to begin producing eggs. She'll lay those eggs in small batches on the ball of pollen she has collected. Bumblebees don't produce honey like honeybees, but close by, she'll have created a tiny little wax pot and filled it with nectar. This allows the queen to lie on the eggs to keep them warm (like birds) and feed at the same time. Bumblebee eggs need to be kept at around 30˚C for about four days.

Brooding her eggs is hard, energy-burning work and she needs to visit large numbers of flowers each day to feed. During each foraging trip, the brood will cool down, so it's vital that her nest is located close to rewarding flowers.

Bumblebees don't nest in my small garden unfortunately, but they do visit to find food and I try to make sure I have something to help them out early in spring, which is their most difficult time of year. The buff-tailed bumblebee is always our first visitor and will visit to feed on the crocuses, my one small willow tree (Salix aegyptiaca) and berberis darwinii, a bright orange shrub that is choc-a-bloc with pollen and nectar. Immediately after those, the most important flowers on the menu are to be found on another small yellow shrub called broom, the herb rosemary and my beloved dandelions.

I try to let as many dandelions as possible grow in the lawn up until mid-April. I spend a lot of time promoting dandelions, but it's hard to stress just how important they are to bees in spring. I know my ten-year-old son is probably brainwashed, but he pointed out that dandelions provide food for bees in spring; let children tell the time in summer; and then provide seeds for birds in autumn. Truth be told, having dandelions in the garden doesn't come naturally to everyone in our household – especially the one who usually controls the lawnmower! It was only the number of goldfinches visiting to feed on the seeds that finally sold the idea!

"My ten-year-old son is probably brainwashed, but he pointed out that dandelions provide food for bees in spring, let children tell the time in summer and then provide seeds for birds in autumn".

By May and June, most bumblebee colonies are in full-steam-ahead mode. The queen is laying eggs which develop into female workers and those workers spend their days out gathering pollen to bring back to feed the next set of larvae in the nest. Nectar-rich flowers provide them with the energy they need to do this. Believe it or not, the most important thing in my garden at this time of year is the small unmown areas of the grass where clover and bird's-foot-trefoil grow naturally and provide food.

By now, bumblebees are also very busy feeding on (and pollinating) my currants, early raspberries and small apple tree.

Through the summer into autumn, I try to have a mix of pollinator-friendly perennials and herbs that will sequentially flower so there are no hunger gaps through the seasons. The key things I've planted are thyme, lavender, oregano, catmint, cala-mint, wallflower, comfrey, verbena and salvia. I also have a laburnum tree that will be buzzing in June. The lovely thing is that by summer we'll be reaping the reward of our bumblebee visitors with the strawberries, raspberries, currants, apples, courgettes, tomatoes, peas and pumpkin, all safely pollinated by my visiting bees, and ripening nicely.

By mid-late summer, it's time for the bumblebee males to appear. The males take no part in child-rearing or looking after the nest. For male bumblebees, life is all about drinking (nectar) and chasing girls. Joking aside, it's not an easy life, as with bumblebees it's most definitely the females who are in charge! Once old enough, males are ejected from the nest to fend for themselves.

Those bedraggled bumblebees you see hanging onto flowers in mid-late summer are males who have nowhere else to spend the night. In our garden it's the lavender that is their favourite hangout. Also, at this time of year, the old queen will allow some of the female workers to become new queens who leave the nest to find mates. In late summer and early autumn, I make sure there are still some flowers in our garden so that new bumblebee queens can fatten up before going into hibernation. If they don't reach a healthy pre-hibernation weight they won't survive through the Irish winter. The things we've planted are aster novi-belgii, rudbeckia and flowering ivy. With bumblebees, only the mated new queen survives to hibernate over the winter.

In our garden, the last bumblebee to hang around is the ginger, common carder bee. Come early October, they'll have all but disappeared again. I like watching that natural rhythm and I like the sense of renewal that spring brings.

We also have solitary bees in our garden. You probably do, too, but have just never noticed them. They are an amazing, charismatic gang of 77 different species in Ireland. A whole new set of characters to watch out for – leaf cutters, wool carders, white-faced bees, sweat bees, mason bees and more. They, too, are disappearing due to hunger because our countryside offers less wildflowers today, making gardens all the more important as refuges in an increasingly sterile landscape.

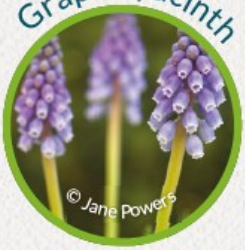
Gardens can be vital pit-stops for our pollinators, birds and other wildlife. It doesn't cost much, and you can be guaranteed that what you are doing is really helping. I don't spend all my time sitting in my garden thinking about bees. However, I do love that when you pause for a minute in a pollinator-friendly garden - there they are, calmly going about their business as they have done for millions of years. I would hate if we didn't protect that for future generations.

Pollinator-friendly plants for YOUR GARDEN

Our pollinating insects is in decline. One third of our 99 bee species are at risk of extinction. By choosing pollen-rich flowers for your garden, you will help provide much-needed food our Bumblebees and other pollinating insects as well as creating a beautiful colourful garden. There are lots of pollinator-friendly plants to choose from.

To learn more about the All-Ireland Pollinator Plan, see **www.pollinators.ie**

Grape hyacinth



Broom

Allium

Bellflower

Stonecrop

Wallflower

Lungwort

Berberis

Rosemary

Borage

Comfrey

Spring

Foxglove

Catmint

Calamint

Scabious

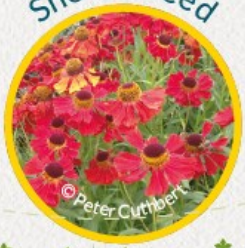
Lamb's-ear

Globe thistle

Verbena

Lavender

Sneezeweed



Summer

How do you know if a plant is pollinator friendly?

- Do you see pollinators visiting? When choosing plants at a garden centre, you will quickly spot which flowers insects visit most.
- Choose **single-flowered** varieties or **perennials** (double-flowered or annuals are generally poor sources of pollen and nectar).

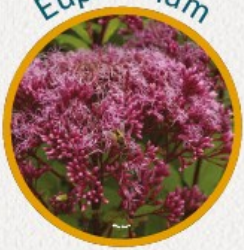
See our website for more actions you can take to help pollinators in your garden, business, farm, school or local community.

Daffodils, Tulips, and traditional bedding plants like Geraniums, Begonias, busy Lizzy, Petunias, Polyanthus or *Salvia splendens* have virtually no pollen and nectar and are of little value to pollinators.

Rudbeckia

Heathers

Eupatorium



Aster

Salvia

Single flowered Dahlia

Autumn

Mahonia

Willow

Viburnum

Crocus

Snowdrop

Helleborus

Winter

www.pollinators.ie

National Biodiversity Data Centre
Documenting Ireland's Wildlife

Pollinator-friendly grass cutting

Reducing your grass cutting regime is the most cost-effective way to help bees – these actions do not involve purchasing wildflower seed

This image shows a mosaic of three

Short-flowering meadow:

Cut parts or all of your grass less frequently to allow wildflowers to grow and provide food.

These flowers will naturally grow in slightly longer grass. The more of these flowers the better!

e different grass cutting regimes.

Creating a BUZZ

Clonmel Tidy Towns, the overall winners of the 2018 Pollinator Award, shows how a community can back pollinators.

In 2018, Clonmel won the national Local Authority Pollinator Award, recognising all that has been done by the town to help pollinating insects. The Local Authority Heritage Officer and Biodiversity Officer Network have funded this special award in the national TidyTowns competition since 2016, and there has been an amazing reaction, with over 144 towns and villages around the country entering the competition and many more following the Pollinator Plan guidelines and taking actions for pollinators.

The Local Authority Pollinator Award is a special TidyTowns award, sponsored by the Heritage Offices & Biodiversity Offices of Local Authorities across Ireland.

www.pollinators.ie

According to Martin Behan, Chairman of Clonmel TidyTowns Committee, who sadly passed away in April 2019. I've always had a passion for wildlife and gardening. And I'm very proud of my home town Clonmel, 'Cluain Meala', which aptly translates as the Vale of Honey."

Clonmel Tidy Towns worked closely with Clonmel Borough Council to protect existing wildlife-friendly features, such as native flowering hedgerows, wildflower habitats. They also planted community apple, pear and plum orchards. These orchards not only help the pollinators, but have the added bonus of providing free fruit for the community. Martin said: "Tree planting became a beautiful occasion. The stories of the wonderful people the trees were dedicated to were so special. Seeing the local community come together at these sort of events is so heart-warming, but to know that we are contributing also to the local environment is just delightful."

Juanita Browne, Project Officer with the All-Ireland Pollinator Plan said of the winners: "It's amazing to see what Clonmel has achieved. Seeing this sort of community work to help our biodiversity truly inspirational. With so much of our landscapes being intensively managed and one third of our bee species at risk of extinction, all these sites act as much-needed safe refuges for bees across the country.
We were very sad to hear of Martin Behan's

"It's amazing to see what Clonmel has achieved. Seeing this sort of community work to help our biodiversity truly inspirational."

Martin Behan and wildflowers planted at Moangariff roundabout Clonmel in 2018.

passing in April. He was a real champion for pollinators and wildlife, and worked so hard for his community over many years"

Clonmel also adopted a pesticide-free regime as much as possible, manually weeding where required. In conjunction with Clonmel Borough Council, they adopted a pollinator-friendly mowing regime. This involves a 'late-cut-grass' in April at a height of 3-4 inches, thereby ensuring a bumper crop of Dandelions, which are a vital source of food for pollinators in Spring. The TidyTowns group in Clonmel also encouraged other local sectors to help pollinators, including local Residents Associations, businesses, schools and home-owners.

"Our commitment to all of these activities commenced in 2015 when we adopted the Pollinator Plan guidelines and the impetus has grown year on year as we witness the success of our efforts and the positive results. Awareness throughout the community has grown, too, and people are now more aware of how all of our actions are so important in relieving the plight of our friends, the pollinating insects. We hope that this attitude persists and that the strategy will continue to reap positive outcome over the coming years," explained Martin.

Seven other regional Pollinator Awards of €1,000 were also presented to Ennis, Sneem, Tullahought, Buncrana, Killeshandra, Swords and Geashill.

To find out how you can take actions to help pollinators or to enter the 2019 Pollinator Award, please see www.pollinators.ie

Create a Pollinator Plan for your SCHOOL

Doubling the number of wildflowers you allow to grow on your school grounds could result in up to 16 times the number of pollinators visiting!

Schools can help in the conservation of our bees by teaching about pollination. Most importantly, students can also help by making sure the school grounds are a safe place that provide pollinators with pollen-rich flowers to feed on. This means your school can become a pit-stop where bees can find food as they move around our landscape carrying out their important pollinator work. Creating a Pollinator Plan for your school is a wonderful project because you will see results really quickly. Lots of schools around the country have started making their schools bee-friendly.

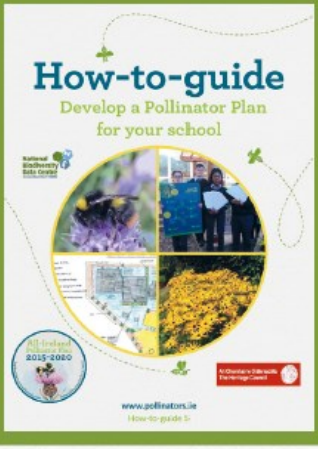
There is a Junior version of the All-Ireland Pollinator Plan and a Guide to creating a Pollinator Plan for your school, as well as presentations and teaching tools, which are all free to download at: **www.pollinators.ie**

WHAT do our pollinators need to survive?

Just like us, pollinators need food and a safe place to live. The main reason they are in trouble is hunger – our landscape, from farms to parks, schools and gardens - no longer offer enough wildflowers. Often this is because we cut, mow and spray so that the everything looks neat and tidy to us. We've been doing this for so long that we think this is how our countryside should look, but unfortunately it means we are squeezing nature out. This means we will lose the important services nature provides, such as pollination. To have a healthy balanced diet, bees need to be able to feed on pollen and nectar from a range of different

Creating a Pollinator Plan for your school is a wonderful project because you will see results really quickly.

Small changes = huge impacts
Flowers = Food for bees



flowers from March through to October. Wild bees come out of hibernation in spring and go back into hibernation again in the autumn. Wild bees don't make honey so they have no way of storing food. This means they are never more than a few days away from starvation – so it's very important that there is a continual supply of flowers to feed on.

The best sources of food for pollinators are native plants (trees, shrubs, wildflowers) but there are also ornamental flowers that can be planted in gardens, schools or parks to provide pollen and nectar. Pollinators also need plenty of safe nesting areas - long grass, bare earth, crevices in dry stone walls or wood - that are free from chemical sprays (pesticides).

Pupils from St. Colman's Community College, Midleton, Co. Cork, designed a Pollinator Plan for their school.

1. Draw a habitat map of your school

Take a look at the schools section of our website www.pollinators.ie to learn all about pollinating insects and what they need to survive. Draw a map of your school grounds. You can use this to identify areas where you can take action to help pollinators.

This pollinator mural was created at Lough Neagh Discovery Centre, Oxford Island, Northern Ireland.

2. Protect wildlife hotspots you already have

Walk around the school grounds and look for areas that are already pollinator-friendly. These might be areas of longer grass with wildflowers; flower beds; areas where plants like dandelions and clover are allowed to grow; native trees; wild corners; native flowering hedgerows; the wild base of hedgerows; or bare ground for nesting solitary bees. Mark all of these areas on your map. You could put up signs to identify these areas and to help protect them in future years. You can print special Pollinator Plan 'Managed for Wildlife' signs from our website: www.pollinators.ie.

3. Reduce Mowing

There may be areas on the margins of playing fields or in field corners where the grass could be mown less frequently in order to allow wildflowers to grow and provide food for bees. For example, narrow strips of longer grass that allow clover to grow will attract pollinators.. It is very useful to put up a sign to explain to everyone why the grass is being allowed to grow longer. Students may like to make their own 'Don't Mow' or 'Wildlife Lawn' signs.

If your school plants bulbs, try to encourage them to include Crocus, which is a great source of food for pollinators in spring.

4. Plant pollinator-friendly flowers

As well as letting native wildflowers grow, you may also want to plant some pollinator-friendly ornamental flowers. If your school has flower beds, check if the plants used are good sources of pollen and nectar. If not, you could investigate whether pollinator-friendly plants could be included in these in the future.

5. Plant pollinator-friendly trees

Trees are very important sources of food for pollinators in spring. The best native trees for pollinators include: willow, hawthorn, blackthorn, wild cherry, and crab apple. If you are planning to plant any new trees, why not choose a variety that is pollinator friendly?

By planting fruit trees, you'll also enjoy the fruits of your labour!

Project: Some trees such as willow can be planted at no cost by taking hardwood cuttings. In March-April observe willows in your local area and note which are favoured by bees. Use these plants for hardwood cuttings next winter. To take a hardwood cutting, select vigorous, healthy stems of about pencil thickness, from the current season's growth. Trim to about 20-30cm long and plant in a pot with soil. They will root themselves and can be transplanted the following autumn.

6. Provide safe nesting sites for bees

The good news is that our bumblebees and solitary bees are not aggressive and have very small colonies, so creating nesting sites does not pose a health and safety risk. Bees are only interested in pollen-rich flowers so they very rarely sting and won't fly after your sugary

drinks like wasps do in late summer!

It is very easy to provide nesting sites for wild bees. Walk around the school grounds to check for areas where you could provide safe nesting sites for bumblebees (long grass), mining solitary bees (bare soil) and cavity nesting solitary bees (by drilling in wood, or by making small bee nest boxes). To learn more about wild bee nesting see our Junior All-Ireland Pollinator Plan and our How-to-guide 'Creating wild pollinator nesting habitat'.

Rudbeckia is a lovely pollinator friendly flower to plant

7. Reduce or eliminate pesticides in your school

Speak to your school caretaker to see how much pesticide is being used and try to reduce this. Most schools probably don't use insecticide, but might use herbicide to kill weeds. If herbicide is being used, try to make sure it is only for health and safety reasons (e.g. to stop paths becoming slippery) and not to tidy up 'weeds', which are actually wildflowers that provide really important insect food!

8. Raise awareness of pollinators in your school

Consider projects to raise awareness of pollinators, their importance and the actions that are being taken to help them. This could be anything from science or writing projects on pollinators to art, poetry competitions, or the Young Scientist competition, etc. You could also run a blog on your school website about your School Pollinator Plan and each action you take.

10 ways to help pollinators

Advice from the All-Ireland Pollinator Plan

1 Let dandelions Bloom

Dandelions provide vital food for hungry bees in spring.

2 Pollinator friendly mowing

Mow every 6 weeks from mid-April to allow flowers like clover to grow and provide food.

3 Pollinator friendly bulbs

Plant Crocus, allium or snow-drop bulbs. They provide better food than daffodils and tulips.

4 Pollinator friendly plants

Begonias, petunias and busy lizzies don't provide food for pollinators. See our website for alternatives e.g. Calamintha nepeta.

5 Plant native flowering trees

Willow, hawthorn and blackthorn flowers provide important food for pollinators.

6 Don't spray

The overuse of herbicides is making it difficult for pollinators to find enough flowers to feed from.

7 Bare soil for nesting

Most of our bees need bare soil to nest. Create a small south-facing earth bank to provide shelter.

8 Put up signage

Inform the public where land is being managed for pollinators. See our website for templates.

9 Junior Pollinator Plan

Download the Junior Plan from our website and help educate the next generation.

10 Actions for pollinators

Log your 'Actions for Pollinators' (www.pollinators.ie). Help us track the build-up of resources in the landscape!

The All-Ireland Pollinator Plan 2015-2020 is a strategy addressing pollinator declines and protecting pollination services on the island of Ireland. See the website to find out what other actions you can take to help.

www.pollinators.ie

National Biodiversity Data Centre

Documenting Ireland's Wildlife