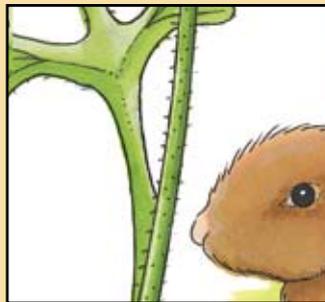
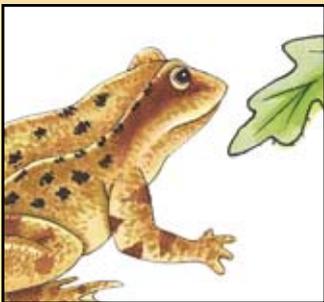
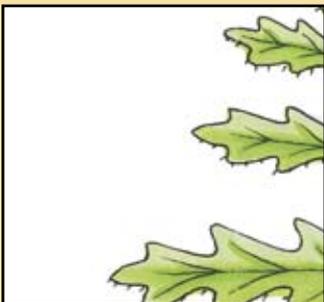
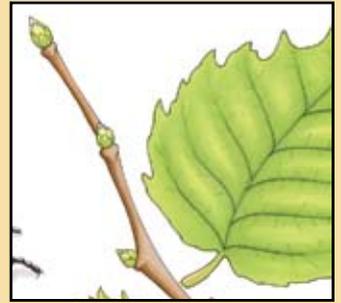
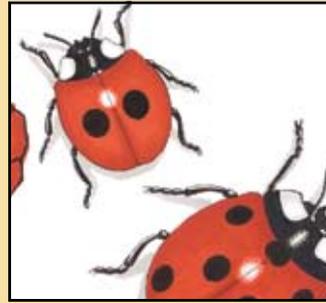
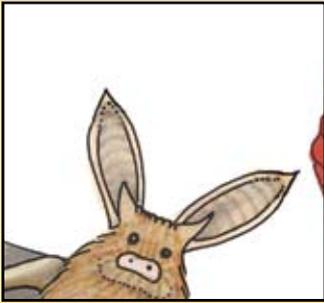


Wild Things at School

A book for Primary School Teachers



by

Éanna Ní Lamhna

Illustrations by Christine Warner

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An Chomhairle Oidhreachta
The Heritage Council



Dedication

I dedicate this book to my father — Peadar Ó Lamhna — who taught me in Fifth, Sixth and Seventh class in St Nicholas' Primary School in Stabannon in Co. Louth.



Foreword

Counties Laois, Meath and Monaghan have come together to develop this book for Primary School teachers called *Wild Things at School*.

“If only the kids learnt even three plants or animals each year . . .”

This statement from the naturalist, author and broadcaster Éanna Ní Lamhna was picked up by us as the basis for this publication. We are delighted that Éanna agreed to write the book. With her usual style, flair and knack of picking out snippets of information, she has written fabulous thought-provoking accounts of all the plants, animals and creepy-crawlies identified for study in the book.

These accounts are well matched by beautiful illustrations from Christine Warner.

Connie Scanlon and James Fraher of Bogfire have brought it all together with their design.

The County Heritage Plans for each of our counties have actions relating to education and for building awareness of our heritage, including wildlife. The Heritage Council has co-funded this book with Laois, Meath and Monaghan County Councils.

We hope that this book will provide an opportunity for every child in Primary School to participate in a nature studies programme which helps them identify common plants, trees, animals, birds and creepy-crawlies. This will make it easier for them to take up ecology modules in the science programme in Secondary School, and help them to know their own local environment.

Our hope is that *Wild Things at School* will encourage children to develop a respect and love of nature that will stay with them all their lives.

We hope that you find it useful.

Catherine Casey, Heritage Officer, Laois County Council

Shirley Clerkin, Heritage Officer, Monaghan County Council

Loreto Guinan, Heritage Officer, Meath County Council



Acknowledgements

Full credit for this book must go to Catherine Casey of Laois County Council, who put it up to me to write a book which would be used to teach the basic plant and animal species to school children, instead of lamenting the fact that they did not know more than daisies and dandelions in Sixth Class. Thanks, too, to Shirley Clerkin of Monaghan County Council and Loreto Guinan of Meath County Council for enthusiastically supporting this project.

I must also thank the Primary School teachers of Ireland who have invited me into their classrooms over the last 35 years to talk to their pupils under such varied schemes as Heritage in School, the Ringo Project, or judging various school garden projects, or indeed as an inspector for trainee primary teachers. The interaction with their pupils has inspired me during the writing of the book.

I particularly want to thank Christine Warner, whose accurate and beautiful colour illustrations and line drawings have brought life so vividly to the words on each page.

I want to thank Connie Scanlon and James Fraher at Bogfire who have designed and laid out the pages of the book and made such a harmonious whole of the project.

My thanks also go to the sponsors — Laois, Meath and Monaghan County Councils and to the Heritage Council.

Finally, I would like to thank my husband, John Harding, who bore stoically the time filched from days off and weekends together, which I needed to complete the writing and proofreading. His reward will be great!

— *Éanna Ní Lamhna, July 2009*



Introduction

If you ask pupils in Junior Infants what wild flowers they know, they will tell you “daisies, dandelions and buttercups”. If you go into Sixth Class and ask the same question you will get the same answer. They know three species in infants and they know the same three eight years later. Yet, with no difficulty, they could learn two wild flowers every year, and a tree, and a mammal, and a bird and indeed a creepy-crawly. So, with relatively little effort, each pupil would leave Primary School knowing, recognising and realising the importance of 48 native Irish species. A co-ordinated effort on the part of their teachers would ensure this.

But how to do it? Which species to teach each year, where to find them, and what pupil exercises to carry out? How does the school ensure that each year the wildlife knowledge of each Class is built on and improved? How do the teachers find out themselves all about the chosen species? What practical work can they carry out with the class to ensure that the teaching is carried out to conform with the Living Things Strand of the Science Curriculum?

This book is the answer to such questions. The 48 species that every child should know are outlined in the following pages. Many of them occur in the school grounds (so the pupils can have firsthand experience of them); others are found in the hedgerows which may be round the school field or nearby. None are rare or endangered. The objective is that if pupils and teachers know all about common species, then they will be in a position to appreciate the value and importance of species that are less common and that require different habitats in which to live.

The book is divided into eight sections — one for each year of Primary School from Junior Infants to Sixth Class. The six species to be taught each year are described. The descriptions are all written for the teachers to absorb and then to teach to the class at whatever standard the class can learn. The “To do” section is geared however at the standard of the class being taught. The ideas are given and again the teacher uses these ideas to carry out the practical work in a way that suits their particular class.

When teachers have Planning Days to work out what the teaching schemes for the year will be, this book will be invaluable. Each year the six species listed for that class are taught. The teachers know what their class has been taught in earlier years and can revise and build on this.

So I look forward to the day in eight years time when I ask a Sixth Class what flowers they know and they can rattle off 16 species of wild flowers, complete with details of what they look like, where they grow and what folklore is attached to them.

Bainigí taitheamh as.



*In the end we will conserve only what we love;
we will love only what we understand;
and we will understand only what we are taught.*

—Baba Dioum, 1968

Taken from a speech made in New Delhi by the Senegalese Environmentalist Baba Dioum
to the International Union for the Conservation of Nature (IUCN).



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Second Class

Self-heal

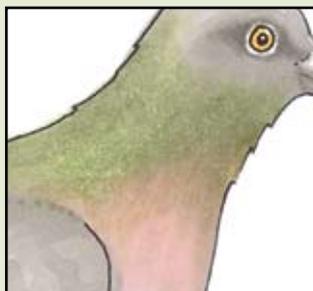
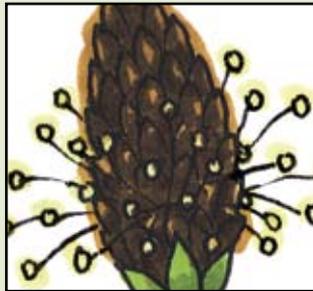
Ribwort

Ash

Squirrel

Pigeon

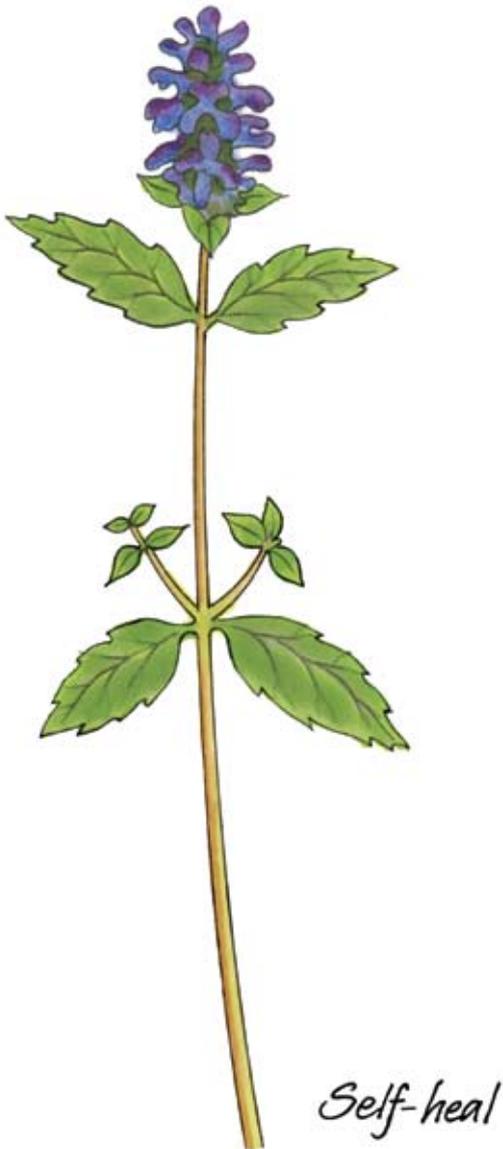
Bee



Self-heal

Latin name—*Prunella vulgaris*

Irish name—*Duán Ceannchosach*



Self-heal is a very common purple flower found in lawns and grassland. It is a perennial and grows from year to year, emerging in spring once the temperature begins to rise. It is a small plant with a creeping stem and slightly hairy oval leaves. It has a square stem which makes it easy to identify. The flowers emerge at the end of May and last until the end of September. These flowers are carried in a loose head at the top of each stem.

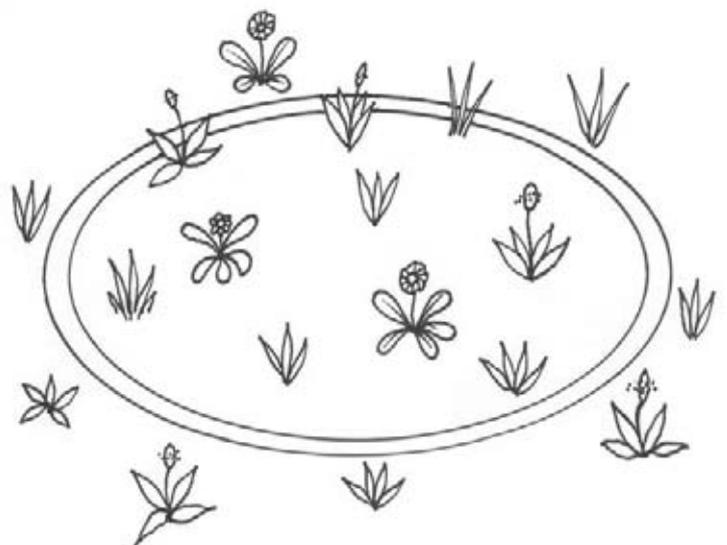
Each flower is purple in colour and is described as being an irregular flower. This means that there is a top and a bottom to the flower as you look at it. The flower has two lips — the top lip is slightly hooded and the bottom lip is three-lobed with the centre lobe the largest of the three.

By Second Class the pupils have already learnt about the daisy, dandelion, white clover and buttercup that grow in the grassy area of the school grounds so it is an exercise in observation sending them to find the purple self-heal flower when they are out of doors on a field trip.

The English name self-heal tells us that this plant played a very important role in the days when people had to get all their medicines from the plants they could gather. This plant was one of the best to heal wounds and so it got the name self-heal from the fact that it was easy for a person to gather it and heal themselves. It was also used for heart complaints — a tea was made from the plant and drunk to cure palpitations of the heart. It was given to children to rid them of worms and it was also thought to cure fevers and, surprisingly, to cure tuberculosis — something that it did not actually do.

To do with Second Class

- A field trip to the grassy area near the school should be carried out in September and again in June to find all the wild flowers they know so far. The self-heal will be a new one to the list and should be easy to find on close inspection. One way to do this is to throw a hoop on the ground and examine all the plants within it. Which is the most abundant? How many different species of plants are there within the hoop?



Ribwort

Latin name—*Plantago lanceolata*

Irish name—*Slánlus*

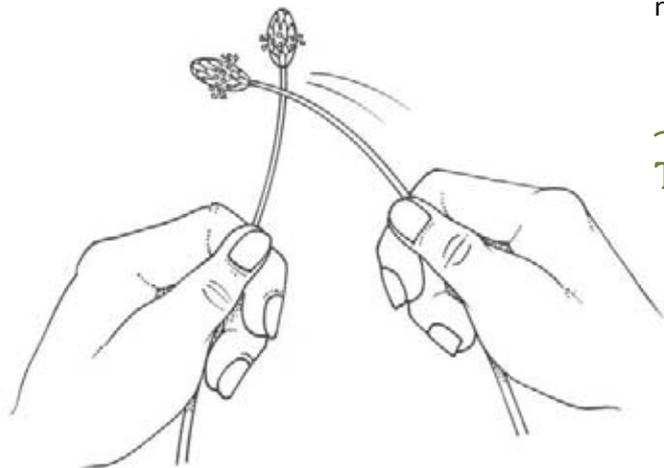


Ribwort is a rosette-leaved plant that can grow and survive in lawns that are constantly mown, so it should be easily found in the grassy areas of the school grounds. Plants other than grass that grow on lawns are commonly referred to as weeds. However, no plant is actually a weed as such — a weed is a plant in the wrong place. Gardeners and farmers who encounter plants they didn't sow among their crops are entitled to call these weeds as they take from the crop they have sown. However, on a grassy area in school, wild flowers are likely to grow among the grass and they add to the biodiversity and educational value of the area.

Rosette-leaved flowers such as daisies, dandelions and ribwort grow from a bud buried deep in the rosette of leaves. Thus, mowing the grass does not kill them — rather it kills their competitors such as buttercups and self-heal and therefore favours them. This plant has a rosette of lanceolate-shaped leaves with ribs going lengthwise along them. The flowers are carried singly on the top of furrowed stems — maybe three or four per plant. There are no obvious coloured petals — the flowers carry their many stamens with the yellow anthers containing pollen, prominently so that the wind can blow the pollen from flower to flower. These can be seen all summer long from May until September.

This plant has several common names — plantain, ribwort, soldiers. Ribwort comes from the five ridges on its leaves which look like ribs and, according to one theory (the Doctrine of Signatures) which said that God left clues in the plants as to what they were good for, was said to cure ailments of the ribs. The name “soldiers” comes from a game played by children who took it in turns to try and knock the heads off each other's plants with their own flower head or soldier.

It was valued long ago for its use in stopping bleeding from external wounds and cuts. The leaves were macerated, applied to the wound and covered with a bandage. Its Irish name slánlus reflects this.



To do with Second Class

- This is one to look for when going on a field trip in early summer. Grass that is unmowed will have the flower heads present on plants. These can be collected by the children — one each — and a game of soldiers can be played.

Ash

Latin name – *Fraxinus excelsior*

Irish name – *Fuinseog*



St Patrick is said to have driven the snakes out of Ireland with an ash stick and it has had a special place in Ireland ever since. Whether or not this is true, it is certainly true that hurleys are made from ash and these definitely have a special Irish significance, ever since Setanta drove a ball down the throat of Culann's hound with one and had to replace him himself, thus acquiring the name Cúchulainn.

Ash is a canopy tree which can grow very tall and it once formed great woodlands together with elm on good limestone soil in Ireland long ago. These woodlands were cleared for agriculture over the centuries and the ash is now mainly found as a hedgerow tree and as a tall tree in parks in cities and towns. It is the very last tree to get its leaves, usually waiting until the month of May for the characteristic black buds to open. The leaves are compound leaves with up to thirteen leaflets on each leaf.

The flowers are wind-pollinated so these appear from the flower buds in early April before the leaves appear. The pollen can thus be dispersed by the wind without being hindered by leaves. The seeds are known as keys. They occur in bunches on the tree, remain there long after the leaves have fallen and as they each have a "wing" they are dispersed by the wind.

Ash is a native species that supports 41 different insect species. A good way to examine these is to shake a well leaved bough in mid June or in early September into an upturned umbrella and see what emerges.

In ancient Irish tradition the ash was a very valued tree and was considered to be one of the seven nobles of the woods as its valuable timber could be used for building, and making furniture.

To do with Second Class

- Find an ash tree near to the school and bring the class out to see it in each of the four seasons. In spring they can make a drawing of the twigs with black buds. In April they can find one with flowers open. In May they can note the date when the large terminal bud opens revealing the leaves. By the end of May they should be able to add a drawing of the leaf to their account of the ash tree. In September they can observe the seeds. These can be planted immediately and some of them at least will germinate the following spring. In winter they can make a bark rubbing with paper and a soft pencil. Mature ash trees have a very rough bark.



Squirrel

Latin names—*Sciurus vulgaris* (red)
Sciurus carolinensis (grey)

Irish names — *lora rua*
lora glas



Red Squirrel



Grey Squirrel



We have two species of squirrel in Ireland — the red squirrel which is our native Irish species and the grey squirrel — an American species which was introduced here to Castleforbes in Co. Longford in 1911. Both squirrels are herbivores and live in woodlands and in parks where there are sufficient numbers of trees to support them. *Neither* species hibernates for the winter in Ireland (despite what was once taught in schools). Squirrels collect nuts in autumn in order to have them to eat in the winter when there is no food available for them (if they were hibernating, like say hedgehogs or bats, they would be fast asleep from October to April and would require no food).

Squirrels build a nest out of sticks called a drey. This may be in the fork of a tree or more likely in a large hole in the tree and here they live during the winter. If it is too wet to forage they can draw on their stores of nuts but on fine bright winter days they will scamper down the tree and feed on the ground — grey squirrels in particular — and in fact they are easier to see in winter as there are no leaves on the trees.

They can have one or two litters per year depending on the availability of food — one in spring and one in summer with up to three or four in each litter. They are weaned nine weeks after birth and the second litter in the year may spend the winter with the mother in the drey.

Grey squirrels are bigger than red and they tend to oust the red squirrels when they come into an area. Thirty years ago only red squirrels were found in the Dublin area but now except for one colony in St Anne's Park in Raheny they have all been replaced by grey. The grey squirrel has spread south and east from Co. Longford but the red is holding on west of the Shannon. Greys do enormous damage to trees as they feed on bark and buds and this can cause small branches to wilt and snap. They also eat hazelnuts and acorns and can digest unripe acorns, something the reds cannot do. Red squirrels like to feed on the seeds of pine cones as well as fungi which they collect from the forest floor. Red squirrels like to live in woodlands where there are evergreen trees with cones. Grey squirrels can live in the wooded areas of town parks as well as in deciduous and mixed forests.

To do with Second Class

- It is quite easy to see grey squirrels if you live in an area where they are known to occur. Early in the day is the best time to go to the park or woodland and the pupils must be quiet and patient.

Pigeon

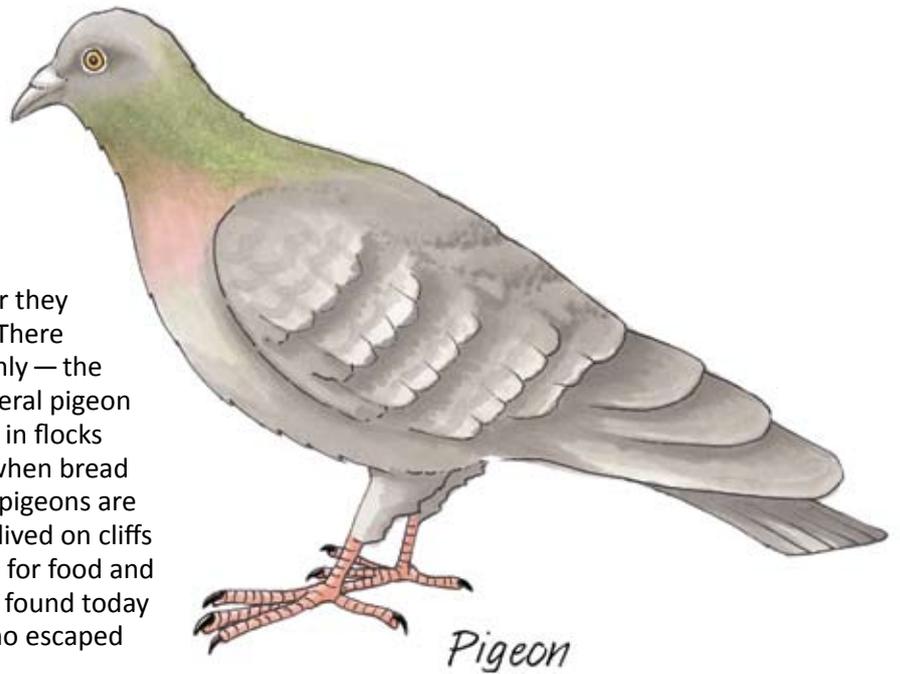
Latin names—*Columba livia* and
Columba palumbus

Irish names—*Colm aille* and *Colm coille*

Pigeons are familiar to everyone whether they live in cities and towns or in rural areas. There are two species that occur most commonly — the feral pigeon and the wood pigeon. The feral pigeon occurs mainly in towns and cities. It lives in flocks and is the species that comes to be fed when bread is scattered in the park or square. These pigeons are the descendants of wild rock doves that lived on cliffs in rocky areas. These were domesticated for food and reared in dovecotes and the populations found today in cities are the descendants of those who escaped and settled in the wild.

Pigeons nest on ledges in derelict buildings and warehouses. Their nests are made of twigs and any other plant material they can find. Two white eggs are laid and are incubated by both parents for nineteen days. As pigeons are strictly vegetarian birds they feed their young with a type of “milk” that they produce in their crop — a storage area for food at the base of their throat. When the birds fledge 33 days later they are taught by their parents to find food such as seeds, berries and buds and of course bread put out for them by humans. They can rear between three and five broods per year. Their behaviour is very characteristic — the male preens and puffs up his feathers and walks purposefully after the nearest female. She walks away just too fast for him to catch up but she doesn't fly away either and he obviously catches up enough times to ensure the five broods.

Wood pigeons are larger birds with a distinctive call — “coo-coooo-coo coo-coo” — described as sounding like “take two John, take two”. They build solitary, large, untidy nests of sticks in trees, especially in trees along the street or in hedgerow trees in rural areas. They also lay two eggs per clutch, which hatch out to a male and a female. Woodpigeons are also strictly vegetarian and feed their young on nutritious milk produced in their crops. The adults are particularly fond of green crows and many's the garden of cabbage has been ravaged by hungry pigeons in the early morning when no one is around to deter them. They can attack farmers' crops in winter when their numbers in rural areas are augmented by migrants in from Britain and mainland Europe. They can cause serious damage to crops of kale and turnips. They are also particularly fond of elderberries and their droppings in autumn can destroy the roof of any car parked by an unwary owner under a roosting woodpigeon.



Racing pigeons are exactly the same species as the feral pigeon and if they are blown off course will often join a group of wild city pigeons. They are able to navigate by using starlight and the earth's navigation force but they do the last bit home by memory. They were very useful during wartime to carry messages in small tubes attached to their leg.



To do with Second Class

- Pigeons are very easily seen — even by a large group of children. So this is a good opportunity to get the pupils to observe the flock and note similarities and differences between individual pigeons.

Bee

Latin names: *Apis mellifera* (honey bee)
Bombus (bumble bee)

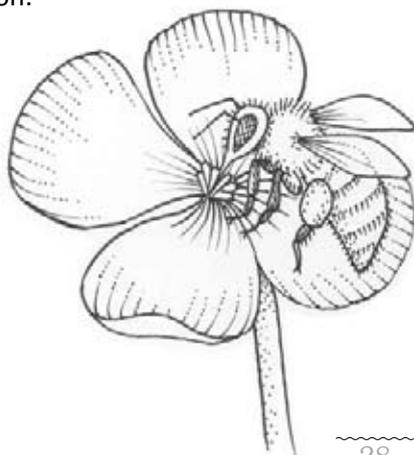
Irish names: *Beach mheala*
Bumbóg



Bumble Bee

Bees are insects that belong to two main groups — social bees which live in communities with a queen, i.e. honey bees and bumble bees, and solitary bees who lay their own eggs and rear their own young as individuals, for example miner bees. Bumble bees are native to Ireland and their queens hibernate for the winter. Honey bees originated in warmer climes and do not hibernate in the winter in Ireland. They cluster around their queen and feed on the stores of honey gathered by them during the summer for the winter months. Therefore, it was the honey bee that was domesticated in the olden times as they were the ones who produced honey in sufficient quantity for humans to harvest.

Honey bees live in a hive with their queen. All the eggs are laid by the queen and for most of the year these are all female. The babies are fed by their older sisters — the worker bees — who gather pollen in special baskets on their back legs especially for this job. Adult bees however do not eat pollen — they eat honey, so this has to be manufactured in the hive from nectar brought back by other bees in their nectar sacs. Worker bees do not do both jobs simultaneously. They spend three weeks gathering pollen, three weeks collecting nectar for honey and then they die of exhaustion.



Honey Bee

The queen lays eggs in great numbers during late April and early May and the hive can become overcrowded. When the workers sense this they build bigger and different shaped cells for the queen to lay in and the resulting eggs are nourished for longer to become queens, and some males are also produced at this time. The first young queen to hatch out goes around and stings all the other younger queens to death. She then leaves the hive on her marriage flight. When she is gone the old queen with a large group of her supporters leaves the nest as a swarm and looks for somewhere else to live. The new mated queen returns to the hive and takes over where the old queen left off. Thus honey bees nests can last for many years and build up enormous supplies of honey if left undisturbed.

Bumble bees' nests are annual affairs. The queen bumble bee comes out of hibernation and builds a nest in an abandoned mouse-hole in a hedge or field. She lays and feeds the first group of young and then they take over the duties of feeding the next batch laid by the queen. They gather pollen and nectar too like the honey bees and also have stings to defend their nest and queen. But numbers never get huge. The new queen mates when it emerges in late summer and then goes off to hibernate. The old queen and the workers die away with the onset of winter and the whole procedure must start again next spring.

To do with Second Class

- Go out and observe a flower bed and see if the class can tell the difference between the honey bees and the bumble bees that are visiting the flowers. Make sure they do not stand in the flight path of the bee and encourage them to observe quietly instead of screaming and panicking. Flowers to encourage bees and butterflies such as lavender, mint, wild thyme, flowering currant and broom can be planted in the school grounds.

About the Author



Éanna Ní Lamhna

Éanna Ní Lamhna is best known for her environmental expertise as a broadcaster on the radio programme *Mooney Goes Wild*. Her Co. Louth accent gives her one of the most instantly recognisable voices on radio. Her ability to bring her subject to life is legendary and her no-nonsense approach to romantic views about wildlife is well known.

She is first and foremost a botanist with degrees in both botany and ecology from University College Dublin. Her interest in the environment has expanded with her work over the years, to include birds, mammals and in particular creepy-crawlies whose doings hold a particular fascination for her. Her ability to awaken enthusiasm for these creatures in her listeners is exemplified by the remark made to her lately, “Whenever I see a spider I always think of you and put it outside instead of stamping on it.”

She began work in 1974 in the Biological Records Centre — in its first incarnation in An Foras Forbartha. She quickly realised that if she was to receive any biological records from the Irish public she would first have to go and teach them about Irish wildlife. So began a career of teachers’ courses, radio programmes, lecturing at third level, field trips with Secondary School pupils and most significantly of all, visits to Primary Schools to teach the pupils and indeed the teachers there, about the wildlife around them.

Her publications include *Talking Wild*, *Wild and Wonderful*, *Straight Talking Wild* and *Wild Dublin*. She has just completed a five-year term of office as President of An Taisce and is currently the Vice-President of the Tree Council of Ireland.

About the Illustrator



Christine Warner

Christine Warner is an illustrator and calligrapher working mostly in the field of education. She provides full colour illustrations, line diagrams and cartoons for textbooks, workbooks and posters. She has worked for many educational publishers and also for Dúchas, Forfás and Trócaire.

While she illustrates material on a wide variety of subjects, she specialises in science, having science degrees from University College Dublin and Trinity College Dublin. She particularly enjoys producing wildlife illustrations and cartoons. She has been an environmental activist for many years. Christine may be contacted via email at cwarner1@gmail.com

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