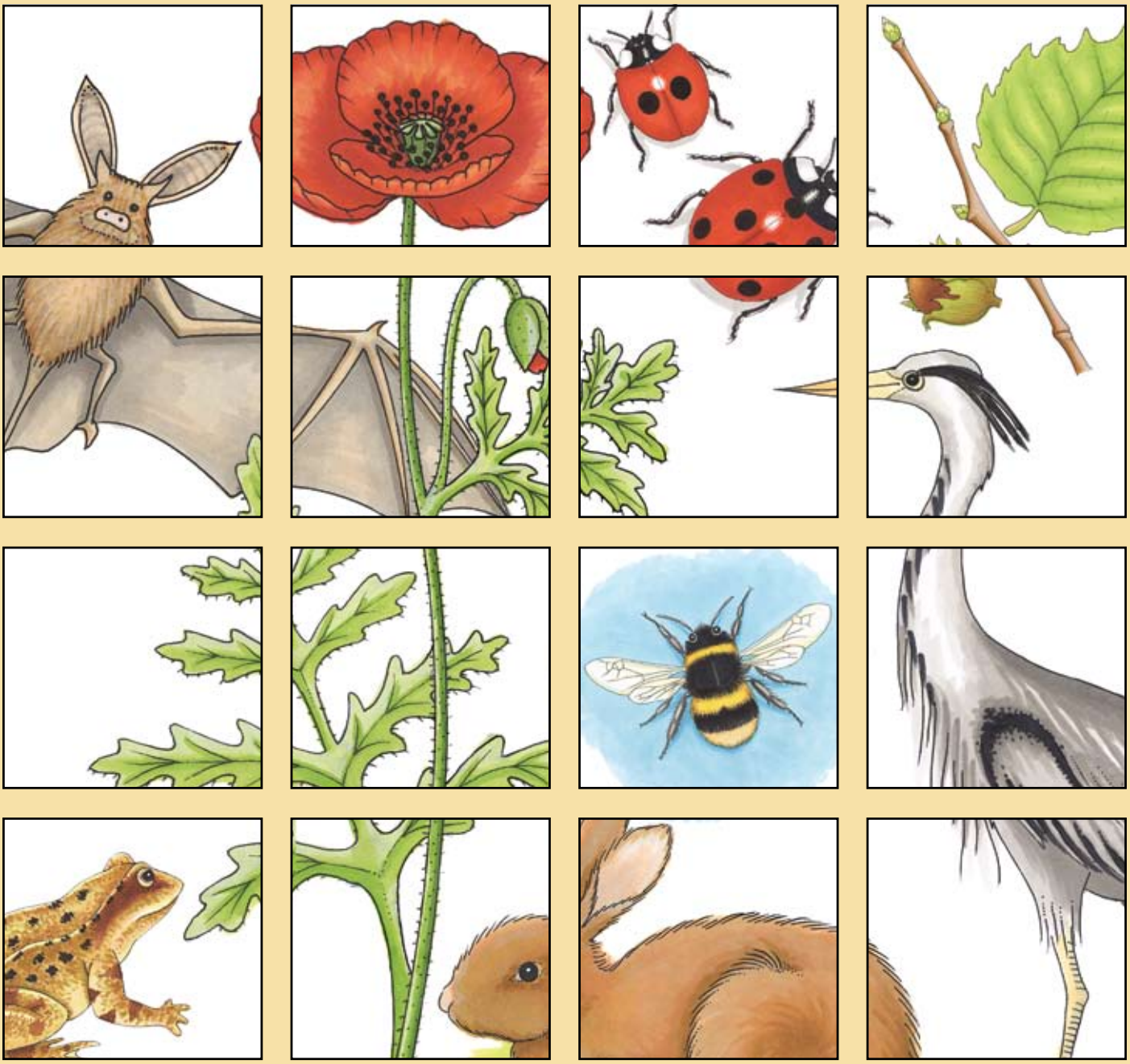
Wild Things at School

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 taithneamh 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).

List of helpful publications

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First Class

Primrose

Bluebell

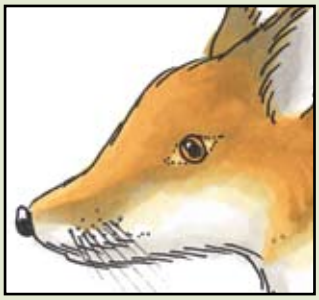
Oak

Fox

Blackbird

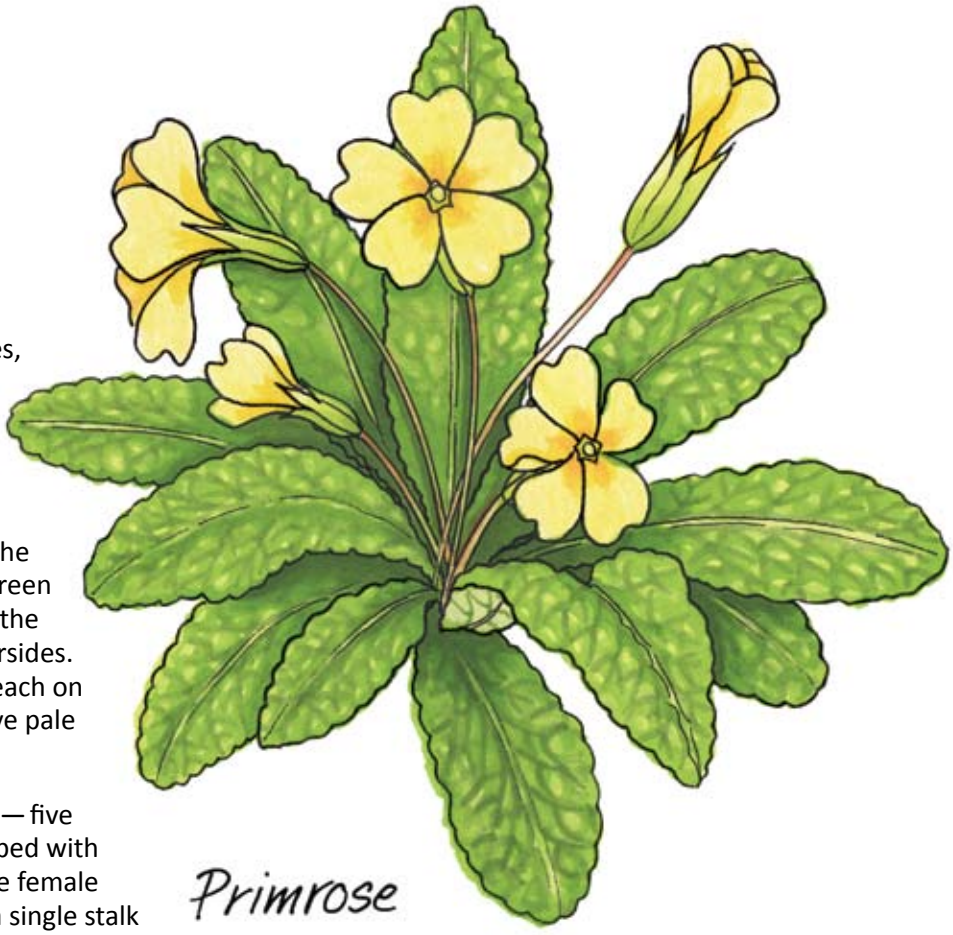
Woodlouse



Primrose

Latin name – *Primula vulgaris*
Irish name – *An Sabhaircín*



Primroses are a real harbinger of spring. They grow in hedges, ditches, on banks and along the edges of woodlands. Their pale yellow flowers are very familiar and they have a very cool fragrant perfume. They appear in south-facing banks to begin with (as early as March). The leaves emerge first — a rosette of green crinkly leaves which taper towards the base and are whitish on their undersides. The flowers then begin to appear, each on its own separate stalk. There are five pale petals, each one heart-shaped.

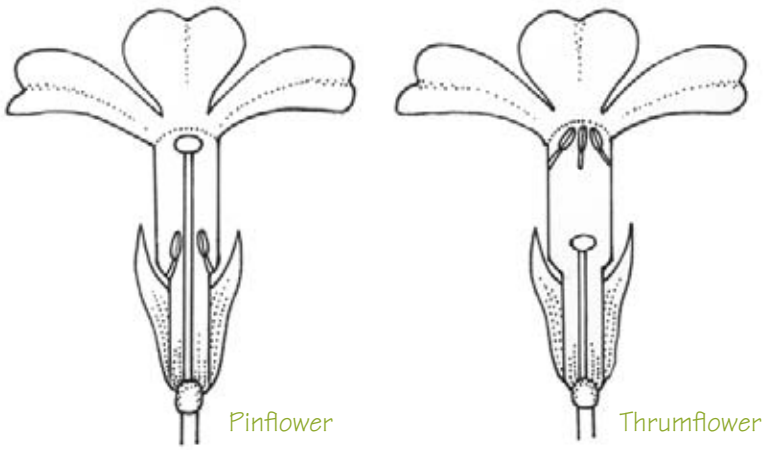
The flowers contain the male parts — five stamens which are small stalks topped with anthers containing pollen — and the female part which is the ovary topped by a single stalk called a style. Pollen from another flower must reach this style to fertilise the ovary and this pollen is carried by insects. To avoid the possibility of self-fertilisation, the stamens and the style are of different lengths. This is of course the case with most species of flowers and indeed the female style is generally longer than the stamens.

However, if you examine the flowers of primroses you will discover something unusual. In about half of the flowers the female style is longer than the stamens as is normal for flowers and you can see it when you look at the circular area at the centre of the petals. This is called a “pin” flower. In the other half, however, the stamens are longer than the style and when you look in you will see the tops of the five stamens rather than the single style. This is called a “thrum” flower.

Primroses were very important long ago to people who kept cows. Butter making from the cream of the milk began in May and on May eve they would rub the flowers of the primroses on the udders of the cattle to make sure that they had enough milk for the butter making. In other areas primroses were thrown on the roof of the house before dawn on May Day to protect the butter from the fairies.

To do with First Class

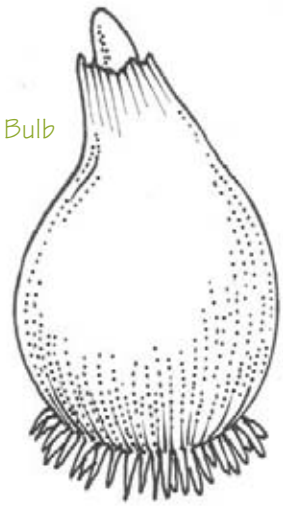
- Go out looking for primroses early in the year and note the date when the first primrose is seen. With climate change, primroses are flowering earlier each year so keeping a record of the first primrose is a way of monitoring this for your area.
- Pupils could count the number of petals and draw the flower and leaves in their workbooks on return from the trip. They could look for pin and thrum flowers.



Bluebell

Latin name – *Hyacinthoides non-scripta*
Irish names – *Bú muc, Coinnle corra* and *Cloigín gorm*

Bluebell



Bulb

Bluebells are woodland flowers that appear in late spring and early summer. A woodland just coming into leaf with a carpet of dark blue bluebells is one of the most beautiful sights of nature. They grow from bulbs that overwinter from year to year in the ground. The long, narrow leaves appear first in April and by May the flowers have opened. Each stalk carries a one-sided line of flowers that droop at the tip. The fruit of the plant is a capsule which splits into three revealing the little seeds inside. These are left on the stalk long after the flowers have gone — right up to July.

The stalk carries seven or eight flowers that open from the bottom up. Each flower has six petals that are fused together at the bottom forming a crown as it were. There are six stamens surrounding the pear-shaped ovary topped by a style. The flowers are pollinated by insects and the ovary swells to become a three-sided capsule containing the seeds. By late July the whole plant has died back and is not seen again until the following spring.

Plants that grow on the floor of woodlands get their flowers early in the year before the leaves open fully on the trees and the canopy closes. They do this to avail of the light that is available in April before the leaves fully open on trees such as the oak, birch and finally the ash by the end of April and the middle of May. This is called adaptation and it is how these plants can live in a habitat that is too shady at ground level later on in the year for anything but ivy and ferns.

Bluebells have a gummy sap in the bulbs underground which was used in the old days as a substitute for starch or as a glue for book binding. Its Latin name is hyacinth and it is related to the hyacinth flower considered by ancient Greeks to be a flower of grief and mourning. The classical myth is that Hyacinthus was a youth that was loved both by the sun god Apollo and the god of the west wind Zephyrus. However, Hyacinthus preferred Apollo and one day when he was playing a game called quoits with Apollo, the jealous Zephyrus blew one of the quoits off its course and it struck Hyacinthus and killed him. Apollo caused a purple flower to rise up from Hyacinthus' blood which is known to this day as a hyacinth.

To do with First Class

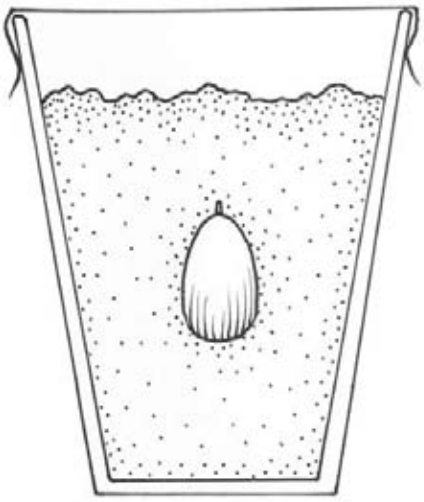
- Plant bluebells in a shady part of the school grounds. Buy the bulbs in a garden centre in autumn and plant them in October.

Oak

Latin name: *Quercus*
Irish name: *Dair*

The oak tree is described as the king of the woods. It was greatly valued in olden times in Ireland and was considered to be one of the "nobles of the wood". It is the canopy tree in our native oak woodlands that have been here since the end of the last Ice Age ten thousand years ago. Oak trees are one of the last trees in Ireland to get their leaves each year — it is usually the end of April before they emerge from their brown buds.

Oak leaves are particularly prized by all sorts of insects who feed on them. The caterpillars of the purple hairstreak butterfly depend on them, as do many species of greenflies, shield bugs, moths etc. It fact it has been estimated that some 286 species of insects and other invertebrates feed on the leaves of the oak. All this eating of fresh oak leaves in May and June leaves the tree somewhat depleted. But the tree fights back, producing a new growth of leaves with lots of unpalatable tannin in them and quite browny-purple in colour at the end of July. These are called "Lammas Growth ", Lammas being the time of year between July and August.



Catkin-like flowers are produced by the tree in early April before the leaves are formed. This is because they are wind pollinated and the presence of leaves would get in the way of the blowing pollen. Acorns are formed from the fertilised flowers and ripen in autumn. These are prized as a source of food by birds such as jays and rooks, squirrels and by mice. Grey squirrels are able to eat unripe acorns, red squirrels must wait until they are fully ripe, by which time if there are grey squirrels in the area the acorns may be all gone, leaving the red squirrel short of food and unable to compete with the grey. New oak trees will emerge from acorns which may have been buried and not retrieved by their owner later in the winter.

There are two native oak species — the pedunculate oak whose acorns are borne on stalks and the sessile oak whose acorns have no stalks. Both are very long-living trees and can survive for well over five hundred years in ideal circumstances. The Irish name is dair and many places in Ireland reflect this. Counties Kildare and Derry are called after the oak as are all the place names beginning with Derry such as Derrynaflan and Derrynane.

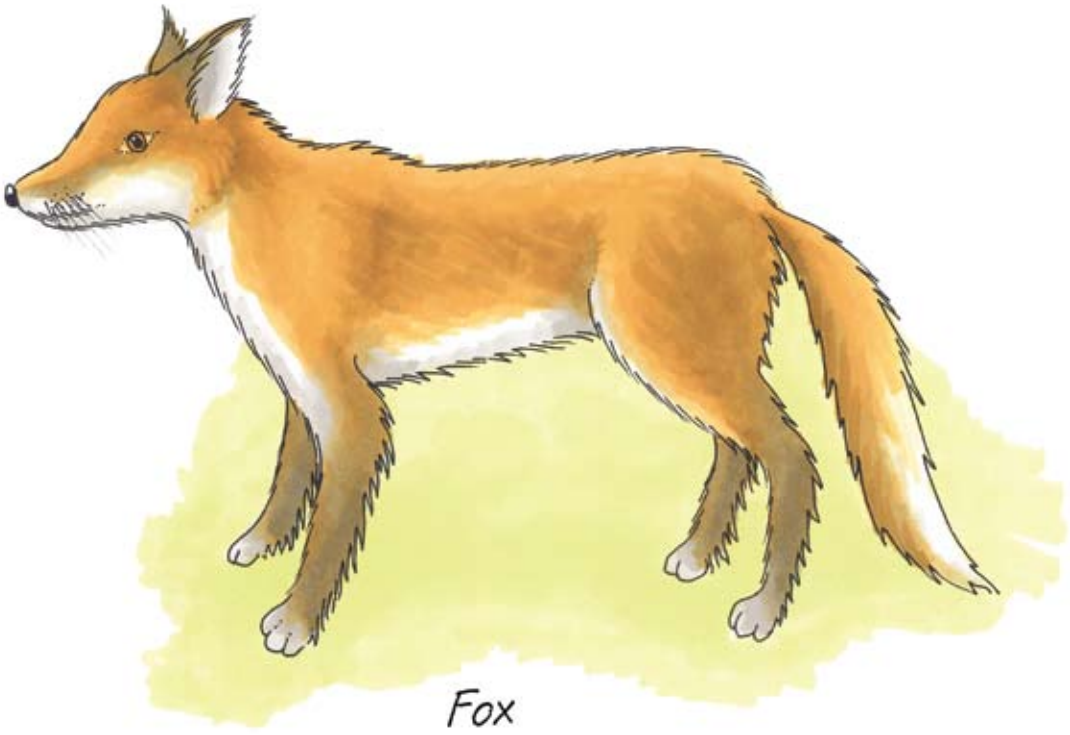
Oak trees produce tannins so oak bark was much in demand by the leather tanning industry. Its timber was excellent for shipbuilding and for use as charcoal. So it was no wonder at the time of the plantations — particularly the Cromwellian plantation in the 1650s when soldiers were paid in land rather than money — that the first thing the planter did was strip the land of its timber in case their tenure there didn't last very long.

To do with First Class

- Find an oak tree that the children can be brought to see. Collect leaves and acorns. Back in class get the pupils to draw outlines of the leaves so that they will learn their characteristic shape. The acorns can be sown in pots of compost and planted out the following summer when the seedlings have emerged.

Fox

Latin name – *Vulpes vulpes*
Irish names – *Sionnach* or *Madra rua*



The fox is one of our most common and familiar mammals. It is a native Irish species, and probably returned to Ireland after the last Ice Age, 10,000 years ago by crossing a land bridge from Europe. It occurs in every county and estimates reckon that there are up to 200,000 foxes in the country. They can live in farmland, woodland, sand dunes, uplands and most successfully of all in built-up urban areas. They excavate underground dens or earths, where breeding foxes have their cubs. These are easily detected because the entrance will be strewn with food debris, as foxes are very untidy creatures. There will also be a very strong smell of fox.

The breeding season occurs from late December to early February. At this time foxes communicate with each other by sound — the male with a series of barks and the female vixen with bloodcurdling screams. The cubs are born between late February and the end of April. There are normally four or five cubs and it takes up to seven months before they are fully grown.

Many young foxes die in their first year as they are unable to establish territory and can die of hunger or are killed on the roads. If they do succeed they can live up to ten years.

Foxes are omnivores, which means they can eat food of animal and of vegetable origin. They are opportunists and will eat a great variety of food such as rabbits, young hares, brown rats and mice as well as small birds, eggs and nestlings, beetles and earthworms, and coastal foxes eat crabs and fish They like blackberries and apples too but of course they have a bad reputation because they kill chickens and eat dead lambs, and are not above killing the odd baby lamb or two as well.

In cities people are quite fond of foxes and they often feed the foxes that visit their garden looking for scraps from the dustbin. Fox cubs are often left alone all day while their parents are looking for food and they can come out of the earth and play in the garden in good weather — a sight which pleases home-owners in urban areas.

To do with First Class

- Read Roald Dahl's book *Fantastic Mr. Fox* and *Run with the Wind* by Tom McCaughren.
- There are several fox songs such as "Maidrín rua" and "Little fox" which are great fun to sing. Download the words and tunes from the internet.

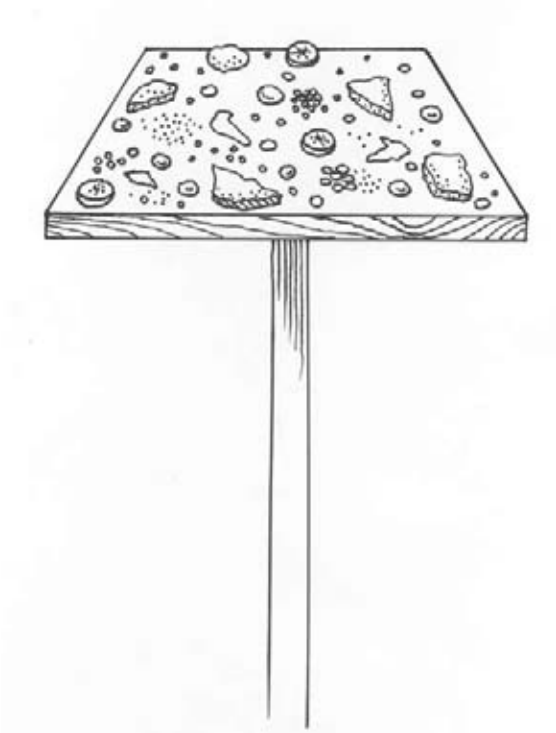
Blackbird

Latin name – *Turdus merula*
Irish names – *Lon dubh* (male) *Céirseach* (female)

The blackbird is one of the most common birds found in gardens, both in cities and towns and in rural areas. There are nearly two million breeding pairs in Ireland and the song of the male is very familiar — particularly as he is generally the very first to lead off the dawn chorus each morning in early summer. Only males sing — this is true for all birds — and the blackbird is singing to attract a mate and to hold territory. It is not long before he is successful, and himself and his newly acquired mate are building their cup-shaped nest out of plant material lined with a mixture of mud and dead grass. Three to five eggs are laid, which take fifteen days to incubate.

Baby blackbirds are fed by both parents on a mixture of insects and earthworms. By fifteen further days they fledge and leave the nest. However, the baby birds are still dependent on their parents for a further three weeks to teach them how to find food for themselves and at this time baby blackbirds are vulnerable to attacks from cats, magpies and other enemies. Adult blackbirds will rear two and sometimes three broods in a single year.

Adult male blackbirds are jet black with a bright orange bill and orange eye ring. Female blackbirds are dark brown in colour and lack the bright orange beak of the male. Juvenile blackbirds are black with brown speckles. Blackbirds are omnivores, which means they eat high-protein food such as worms and insects when available and indeed feed this to their young — but in winter when such food is not available, they can eat and digest fruit and berries which they swallow whole.



To do with First Class

- It is very important to feed birds during spells of bad weather in winter so the class could set a bird table within view of the classroom window and put out food such as bread, seedcake, seeds and fruit. Half-apples on the ground are particularly popular with them too. It is important to put out fresh water for birds to drink and to bathe in.

Woodlouse

Latin name – *Oniscus ascellus*
Irish name – *Cláirseach*


Woodlouse

Woodlice are very common creatures found in gardens and school grounds. All you have to do is turn over a stone or a flower pot or look under dead leaves and a colony of woodlice will be uncovered. They are not insects — they are members of the group Crustaceae and are related to crabs and lobsters. Insects all have six legs but the woodlouse's body is made up of seven segments with a pair of legs on each segment — giving it fourteen legs in all. Their bodies are different to those of insects too and will dry out if exposed to light for too long. So woodlice come out at night and hide away during the day to avoid drying out.

Woodlice feed on dead plant material such as dead leaves, rotten wood and dead plant roots. They play a very important role in the food chain as the nutrients locked in the plants are broken down and released by their activities. This is why they are so abundant in the leaf litter at the bottom of a hedge or in woodland.

They in turn are part of the food chain, being eaten by spiders, pygmy shrews, hedgehogs and any bird sharp-eyed enough to see them. We have over 20 different species of woodlouse in Ireland — one called the pill bug is able to roll itself into a sphere when disturbed and this helps it to evade capture.

To do with First Class

Because they occur in such numbers it is easy to collect a dozen or so. In the class you can set up simple behaviour tests with them.

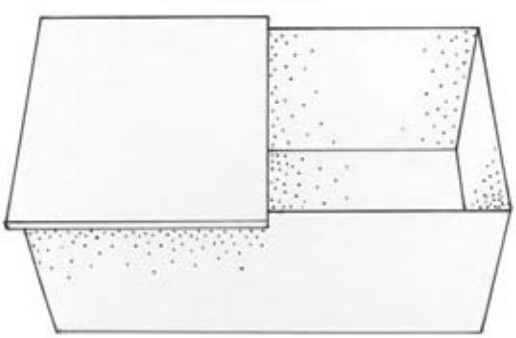
Do woodlice prefer light or darkness?

- Get a shoebox. Have half the box covered with a lid. Put six of the woodlice into this box. Have a second similar shoebox with no lid as a control to show that you are doing a fair test, and put the other six in there.

  Come back later and observe where the woodlice are. They will all be in the shady side of the box.

Do woodlice prefer damp or dry?

- You can set up a similar experiment with the two boxes only this time no lids on either but a damp sponge in one section of one of the boxes and a dry sponge in a different section. Put two dry sponges in the second box. Put six woodlice in each and observe what happens. Are there more woodlice at the damp sponge than at the dry sponge?



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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