



Spring in the Woodland

Roe Valley Country Park
Resource Book for Key Stage 2 Pupils

NIEA Northern Ireland
Environment
Agency
www.ni-environment.gov.uk

Introduction

This booklet has been prepared for use as notes for teachers of KS2 pupils. Older children may also find it useful. It may also be interesting to the general public. The booklet is based on the wildlife in the woods at Roe Valley Country Park, Limavady. This is a typical deciduous woodland so the material applies to any similar woodland or hedgerow. The park belongs to Northern Ireland Environment Agency (NIEA), who encourage schools and other groups to visit their sites which have educators on hand to provide an education service to schools and the general public. A visit to Roe Valley Country Park can be arranged by contacting:

The Educator
Roe Valley Country Park
41 Dogleap Rd
Limavady
BT49 9NN
Tel: 028 7776 7532



Roe Valley Country Park Springtime in the Woodland

The old Celtic calendar saw spring beginning on February 1st, Saint Brigid's Feast Day, and ending on the last day of April. During this time Nature wakes up from the quiet time of winter and the plants and animals become active again. The weather does not necessarily get any better but the days always get longer. It is this that switches nature back into life.

PLANTS

All plants rely on the sun for growth. During the winter there is less sunlight so many plants survive the winter by closing down. Deciduous trees lose their leaves. Some plants survive only as seeds. Others have developed bulbs which allow them to have a quick start in the spring. Evergreen trees continue to grow during the winter.

Spring Flowers

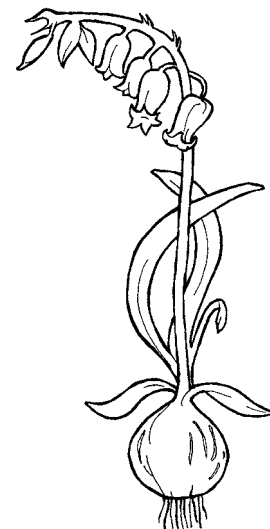
The snowdrop is the first flower to be seen in spring. It first grows in early January underneath the trees in the woods. The **bulb** at the bottom of the stem allows it to get an early start. It is able to grow and produce seeds before the leaves are on the trees. All spring flowers use the same trick. They have bulbs or thick roots that store energy. They come out in a sequence: snowdrop, lesser celandine, wood anemone and finally bluebell. Each flower brings a new colour to the woodland floor.



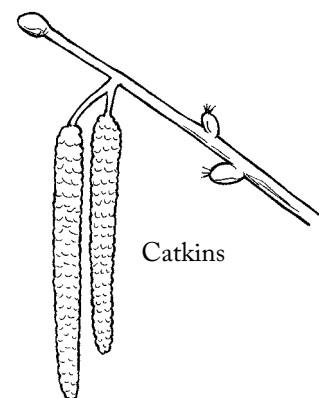
Catkins

Trees are also flowering plants. This is obvious with fruit trees like the apple which has an easily recognisable white flower. Other trees have flowers called **catkins**. These are not brightly coloured because they do not rely on insects for pollination. They use the wind. There are few insects about in the spring so pollination by insects is useless. The catkin is the downy male part of the flower which hangs down from the branches of the tree. The female part of the flower is much smaller. The willow and hazel have catkins. The catkins are easily seen as they appear before the leaves.

1. Snowdrops
2. Lesser Celandine
3. Wood Anemone
4. Bluebells



Bluebell



Catkins

Invertebrates

Invertebrates are animals without a backbone. Invertebrates survive the winter in many ways. Some do not change much. They carry on in much the same way throughout the year. Some hibernate; others survive as eggs, larva or pupa. In all cases they become more active and numerous as the light gets stronger and temperatures increase.

The Leaf Litter

The leaves lying on the woodland floor provide a **habitat** for many **invertebrates**. They survive by eating the leaves or each other. This habitat is not much affected by the seasons. It is always cool, damp and dark underneath the rotting leaves. In very cold weather the leaves may freeze. During these times the invertebrates burrow underground. For the rest of the time they are able to survive not much affected by conditions outside the leaf litter.

Bumble Bees

One of the first insects we see in springtime is the bumble bee. There are many different kinds. The large early bees we see are queens. They survive the winter by **hibernating**. The queen begins a new colony by laying her eggs in a hole in the ground. Throughout the summer the colony will grow with the queen, workers and drones. They will survive on nectar and pollen from flowers. Only one queen is needed to survive the next winter. Later in the spring queen wasps begin to stir. Like the bumble bee they have survived the winter by hibernating. Honey bees survive the winter by huddling together in their hives.

AMPHIBIANS

Amphibians are animals which can survive both in and out of water. They spend their early life using gills like fish. As adults they breathe in air using lungs. They can also breathe through their skin under water. They lay eggs without shells in water. They have a distinct life cycle. This involves a number of changes. This is called **metamorphosis**.

Frogs and Newts

The common frog and the newt are the only amphibians found in Northern Ireland. In winter they hibernate. They emerge to breed and lay their eggs or frogspawn in ponds around the park. This happens in early spring when they are often seen moving from their hibernation places towards the ponds. The eggs are the first part of their life cycle. The eggs hatch into tadpoles. They use gills to breathe. They are herbivores living on algae growing on pond weed. Finally the tadpoles change to small frogs which are carnivores. The whole process takes twelve weeks. From then on frogs spend most of their time out of the water.

Newts arrive in the pond later in the spring. They lay their eggs in strings rather than clumps. Their tadpoles take much longer to develop. They stay in the pond for a year.



Leaf litter



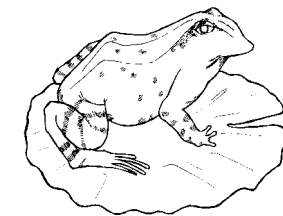
Bumble Bee



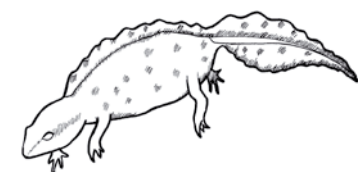
Wasp



Honey Bee



Frog



Newt

Birds

We find birds interesting because they are often beautiful but also because they are in many ways like us. This is especially true in springtime when they build their nests and raise their young. They are difficult to see because there are so many trees.

Rooks

Most birds are very secretive and private during their nesting time but rooks are very sociable and public so are easy to study. In spring the rooks are involved, like many living things – plants, invertebrates, other birds and mammals, in **reproduction**. The process begins with the rooks pairing off. The male and female court one another. They fly about together and offer each other nest material. They then build a new nest or repair an old one. Mating then takes place. Eggs are laid. They must then be incubated until they hatch. The young birds must then be fed until they are strong enough to fly.

The Chiffchaff

Most birds are difficult to see in the woodland. The chiffchaff is very obvious because its song says its name. It is one of the first birds to begin singing in the wood. Male birds sing to attract a mate and establish a territory. The chiffchaff is part of a group of birds known as warblers. These are part of a larger group called **migrants**. Migrants do not stay in Ireland all year but move in and out according to the season. Birds which stay all year are called **residents**. There are two groups of migrants – winter and summer. Winter migrants are birds from the far north which use Ireland as a winter refuge. They include swans, geese, ducks and waders. In spring they return to the far north to breed. Summer migrants include the chiffchaff. They leave in autumn for the south. Here they can find the insects they eat. We have already seen that most insects are absent from Ireland in the winter. They return in spring because the long summer days allow them more time to breed. Other well known summer migrants are the swallow, the cuckoo and the willow warbler.



Rook



Chiffchaff



Swallow



Cuckoo



Willow warbler

Mammals

If you are reading this you are a human being. Human beings can do lots of clever things like read, but we are also mammals. This is why we find other mammals interesting because they are the living things most closely related to us.

There are many mammals living in the woodland: badgers, foxes, otters, rabbits, hedgehogs, mice and rats. They are difficult to see because they are mostly **nocturnal** and are afraid of people. We have to rely on signs of their presence rather than seeing them directly. These signs include: holes in the ground, tracks, food remains and their dirt. They do not breed in winter as there is not enough food for them. They only begin to raise their young when food becomes more plentiful in springtime.

Badger

In spite of being a large animal the badger is rarely seen. We are only aware of their presence because of the signs they leave. The most obvious sign is the large set they dig. Another sign of badgers' presence is the dead ones seen at the side of the road. There are more dead badgers in spring than at any other time. Badgers begin to raise their young in the spring. It is at this time that last years cubs must leave the set. They begin to wander about seeking new sets. Being inexperienced and in unfamiliar territory they often meet with accidents during the spring.



Badger

Grey Squirrel

Grey squirrels are not native to Ireland. They were introduced from North America in 1911 to County Longford. They have spread out and had reached most parts of Northern Ireland by the year 2000. Spring is the time of year for reproduction. The squirrels' courtship includes chases. After mating the males take no part in the rearing. The female builds a special nest or **drey** to raise their young. Born in February they leave the drey in May. If you are lucky you will see squirrels running about the trees or feeding on the ground. You may also find signs of their presence – nibbled pine cones, hazelnuts split in half or even spot their drey. This is like a magpie's nest but is placed near the fork of a tree rather than on the outer branches. Unfortunately the grey squirrel has caused a steady decline of our native red squirrels. They carry a disease called distemper which does not affect them but kills the red squirrels. There is a danger the red squirrel will become extinct.



Grey Squirrel



Drey

1. Think of the different signs of spring you saw on your walk. Write a few lines about: trees, flowers, invertebrates in the leaf litter, insects, birds and mammals.

2. The information above used a number of words which you may not have seen before: **bulb, catkin, habitat, invertebrate, hibernate, metamorphosis, reproduction, migration, resident, nocturnal, drey, mammal.**

Below are a number of definitions of these words. Fit the correct word in the space provided:-

- a. _____ is the flower of a tree which uses wind to fertilise.
- b. _____ is the thickened root of a flower which stores energy to allow the flower to grow quickly in spring.
- c. _____ is a kind of animal that has hair, live young and feeds its young on milk.
- d. _____ is the home of a squirrel.
- e. _____ is the place where an animal or plant lives.
- f. _____ is an animal which has no backbone.
- g. _____ is sleeping over the winter.
- h. _____ means 'coming out at night'.
- i. _____ is a bird which stays in Ireland all year.
- j. _____ means moving to another place.
- k. _____ is to ensure that life continues.
- l. _____ is the changes of form some animals go through in the course of their life.

3. Draw a picture of the woodland in springtime.

Northern Ireland Environment Agency
Klondyke Building
Cromac Avenue
Gasworks Business Park
Belfast BT7 2JA
T. 0845 302 0008

www.ni-environment.gov.uk

Our aim is to protect, conserve and promote the natural and built environment for the benefit of present and future generations.



An Agency within the Department of the
Environment
www.doeni.gov.uk



INVESTOR IN PEOPLE