



Wooded Wonders

*exploring
the natural
heritage of
ancient
woodlands*



Supported by the
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INTRODUCTION

Woodlands in Leicestershire and Rutland are a much loved asset which are enjoyed by many. Woodland is one of the most easy to recognise habitats, and many people believe that Britain is well wooded. In actual fact, compared to our woodland cover 5000 years ago, Britain has little. People have been removing woodland trees for thousands of years, and there is not a woodland in Britain that remains totally natural.



A picturesque woodland scene at Beacon Hill

Woodland is very complex, it can contain many different trees, in any order. A tree is defined as a woody species, which can grow to at least 5 metres in height, which forms a *canopy* (the leafy bit that can

block sunlight). The canopy is used as a “caterpillar canteen” in two ways; the caterpillars munch on the leaves, and birds (such as chaffinches) munch on the caterpillars! Woody species that are under 5 metres tall are called *shrubs*. The space they occupy (underneath the canopy) is called the *shrub layer*. This normally contains hazel and hawthorn. Under this is the *ground flora*, this consists of smaller shrubs and flowers. This is the area where bluebells grow.

Large numbers of visitors to woodlands open to the public, across the two Counties, have fond memories of walking through woods, densely covered by carpets of bluebells, whilst listening to the songs of woodland birds. Other visitors might prefer the seasonal changes and the warm colours of falling autumn leaves rustling in the wind.

Woodlands aren't just of value to humans, they provide homes to a wide variety of trees, plants, birds, insects and animals which need them in order to survive.

There is a wealth of history and folklore associated with these ancient woodlands, which adds to the educational interest and the mystery associated with them.



Traditionally, woodlands were used as reserves of wood for fuel, but timber has since been replaced by modern fuels, such as coal, oil and gas. As the economic value of woodland becomes less important, we are in danger of losing a beautiful and useful part of our countryside.

Many woodlands have been destroyed this century, along with lots of types of insects and plant life which depend on this habitat.

This booklet highlights the wildlife of our woodlands, and the unique features of woodlands that make them a special part of Leicestershire and Rutland. With the enclosed survey form, it aims to encourage you to explore your local woodlands. They were here for our ancestors, but there is a danger that they won't be here in the future.



A local group of nature sleuths exploring a woodland

WHAT ARE WOODLANDS?

Woodland is land where trees are quite densely grouped and cover a considerable area. This differs from parkland, where trees are far enough apart to develop spreading crowns.

Ancient woodland is a name given to woods that were around before the year 1600. These can be found using historical maps, which show us the position of woods before 1600, or from features on the ground such as wood banks.

Some woods have been made (or partly made) into plantations of trees such as conifers; these are planted for their timber and host little wildlife compared to native woodland trees. Martinshaw Wood near Groby is an example of ancient woodland which has been extensively replanted.

Only 2% of Leicestershire is covered by ancient woodland. In roughly half of this area, the original trees have been replaced by new plantings.

Origins of Woodland

Thousands of years ago, virtually the whole of Britain was covered by woodland. Human activity has since led to the destruction of over



90% of this. If land is left to its own devices it will over time naturally revert back to woodland. This natural process is called succession.

The History Of Woodland

When the last Ice Age finished about 12,000 years ago, woodland slowly began to form. Britain was not an island, but was attached to Continental Europe as a single large land mass. This continued until roughly 5,000 BC, when the English Channel and the North Sea became wide enough to prevent the natural introduction of new tree species to Britain.

For 2,000 years virtually the whole of Britain was covered by woodland, but this changed under the impact of human influence. Woodland was cleared for agriculture; seeds were sown and remaining areas of woodland became increasingly managed for food for cattle and timber for fires, building and general materials.

In 1086, the Domesday Book recorded that Leicestershire and Rutland had been mostly cleared of their woods, except for the Charnwood area which was a mixture of woodland and rough farmland.

Timber and underwood became more valuable in the next 1000 years due to the increasing scarcity of wooded areas.

Laws were introduced against unauthorised collecting of wood. In the Middle Ages, wood was being pillaged, very regularly, for financial gain, without much regard for the (exploited) woodlands. The population of Leicestershire and Rutland began to increase at a faster rate, and the much improved technology for farming made woodland management more efficient.

The use of wood as fuel greatly decreased in the early 19th Century, due to the wide availability of coal. North-West Leicestershire became an important local source of coal.

The practice of gamekeeping in the 19th and 20th centuries was very important for woodland management. Owners realised the need for a variety of tree and shrub cover, along with ground vegetation to make sure pheasants wouldn't leave. A lot of work went into looking after woods for gamebirds, and these woods often benefited in nature conservation value.

Many woods in Leicestershire and Rutland (and Britain) were



clear felled to support the war effort in the two World Wars; which in total resulted in the removal of 450,000 acres of British woodland.

More than half of British woodland present at the end of the First World War has been lost.



Hedgehogs love woodlands

The Decline of Woodlands

There is an enormous variety of wildlife which depends on woodlands. The trees, plants, insects, birds and animals that are present in a wood make up the rich variety of wildlife that can be discovered in woodlands throughout the area.

Woodland trees are used as homes by many birds, insects and animals. British longhorn beetle larvae develop inside many of our woodland trees. Leicestershire is nationally known as the “Fox County”, but more foxes are having to adapt to life on our urban streets with the increasing destruction of their woodland habitats. In fact many types of birds; such as blackbirds and blue tits, and animals such as hedgehogs, that you may see outside your window, would naturally prefer woodlands.

Reasons For Decline

The last 50 years has seen many woodland plants go into decline, or even become extinct! An example of this is the crested cow-wheat. This plant is in low numbers throughout England and was declared extinct in Leicestershire and Rutland in 1964.

There are a number of reasons for woodland decline. Woodlands can be badly affected by development plans; for example, part of Martinshaw Wood in Groby has been cleared for the M1. This ancient woodland has also been a victim of another form of decline; the process of removing ancient trees and replacing them with conifers (for financial gain) that house far less wildlife.

The practice of quarrying has led to the removal of more than



30 acres of woodland at Buddon Wood in Quorn. This led to a decrease in habitats for the spreading bellflower.

The gradual decline of coppicing has contributed to the neglect of some woods, whilst others have benefited from becoming high forest which suits many woodland birds. Other woods have been affected by the use of pesticides on fields next to woodlands. This can result in damage to a wood's wildlife.

Modern activities, such as paintball games, can also ruin a woodland. Tree bark is damaged by the paint, and plants are often trampled on. Much damage is done to bluebells, as trampled plants rarely recover, and this is worse than hand-picking flowers (an illegal practice).

Woodlands form a beautiful part of our landscape; so when they are removed we lose some of the scenery that has been enjoyed by our ancestors.

TREES FOR HEALTH

Most people have heard of the need to save tropical rainforests in exotic places such as Brazil,

but the lack of woodland habitats in Leicestershire and Rutland also poses problems to our well-being.

Woodland trees are important as they absorb the greenhouse gas, carbon dioxide; and in return they provide us with essential oxygen.

A single mature beech tree produces enough oxygen for 10 people!

Tree leaves trap harmful dust particles which cause breathing difficulties and illnesses, such as asthma. It has also been proved that people have lower stress levels when viewing woodlands (and other natural habitats) compared to when looking at urban areas.

One of the most healthy forms of exercise is strolling in woodland!

The air around woodland is much fresher, as there is extra oxygen which is released by surrounding trees.

Many important medical advances have come from tree extracts. Beech tree extracts help with breathing illnesses, and work for the Cancer Research



Campaign has shown that needles from yew trees (famous for being poisonous!) may hold a cure for cancer.

Aspirin was first extracted from the bark of willow trees.

The environment would be much healthier if there were more woodlands. With Leicestershire and Rutland amongst the least wooded counties in Britain, strong action needs to be taken.

"BAP"- TO THE FUTURE!

In 1992, the 'Earth Summit' in Rio de Janeiro formed the Convention on Biological Diversity. As part of this, the UK national Biodiversity Action Plan (BAP) was launched with the aim of protecting endangered species and habitats. Biodiversity Challenge, the BAP for Leicester, Leicestershire and Rutland, identifies our most important species and habitats, and the means to protect and restore them. Local people are needed to help meet targets for woodlands and other important habitats.

What is "Biodiversity"?

The word biodiversity is often used by conservationists. Biodiversity is the variety of all living things. This doesn't just occur in woodlands, but everywhere!

There are 2 different types of woodland highlighted in our local Biodiversity Challenge. These are wet woodland; dominated by alder and willow trees; and sessile oak woodland.



Alder trees showing catkins

The local Biodiversity Challenge estimates that sessile oakwoods have declined by an alarming 63% since 1930!



SELECTING WOODLANDS AS WILDLIFE SITES

Wildlife Sites are the most important areas of rare and declining species in our counties. They represent some of the best examples of Leicestershire's & Rutland's habitats.

Wildlife Sites can also be areas of ecological interest which allow people to experience natural habitats and species and learn about them at the same time.

Such sites are important as they can be seen as priority areas in need of action in the local Biodiversity Action Plan. Local development plans give special recognition to the value of them to the community.

Woodlands are classed as Wildlife Sites if they meet at least one of these criteria:

- Areas of woodland that are proved to be on sites which were once ancient woodland.
- If trees in a woodland are growing naturally, in an area larger than 5 hectares.
- There are colonies of bluebells in a woodland with an area of at least 100 square metres.

- If a woodland is included in English Nature's Leicestershire Inventory of Ancient Woodland.
- If a woodland is dominated by willow and /or alder on a wet woodland floor.

WOODLAND MANAGEMENT

All woodlands in Leicestershire and Rutland have been managed to provide an economic return at some time in the past.

Coppicing involves felling the tree near to ground level. The stump which is left over sprouts shoots to form a "stool" where a number of new trunks grow. This form of woodland management has declined in the last 150 years, but conservationists have realised its importance for wildlife and are beginning to re-introduce it to some woods.

Pollarding is a method similar to coppicing, only the tree is cut between 6 and 15 feet up the trunk. This is done when grazing animals are present as they may eat new shoots and stop the tree regrowing. Pollarded trees were historically used as boundaries of ancient woodlands. If found inside ancient woods they may indicate ancient boundaries!



What Happens Next?

When a tree is coppiced or pollarded a lot of products can be made from the wood. However, trees should only be coppiced by a woodland expert who knows how and when a tree should be coppiced. A tree should not be coppiced for timber if it will damage a woodland habitat.

Coppiced woodland often includes uncut trees called standards, which were used for timber in the construction of buildings etc. If all the trees in a wood are standards, it is called high forest. This type of management became popular in the 19th Century, when woods became important for shooting game.

A range of useful products can be made from woodland trees, including hanging baskets and broom handles. Firewood has been used throughout history as a heat source. Tree stakes can be made, and are used to help support new trees. Wood has also been traditionally made into trellis (usually out of the wood of coppiced hazel trees), which is commonly used in gardens as fencing. More traditional products include roof thatching and sheep hurdles.



One of the products of coppicing is roof thatching

The folklore of coppicing

In the 17th century, February 24th became famous for being "St. Matthias' Day".

St. Matthias was beheaded with a type of axe used for coppicing woodland trees. He quickly became the patron of the woodcutters and carpenters, and February 24th was used as the first "Coppice Woodland For Fuel" day.

WOODLAND WILDLIFE

Woodlands in Leicestershire and Rutland host a vast array of wildlife.

What Are "Indicator" Species?

When searching for ancient woodland, conservationists may look for plants and insects which are confined (or almost confined) to ancient woods.



These are called indicators of ancient woodland. In theory if they are in a wood, the woodland is of ancient origin. In reality it takes more than one indicator to prove that a woodland is ancient; and even then it doesn't mean that a site is ancient. These sites are rare in Leicestershire and Rutland.

There are less than 200 fragments of old woodland in Leicestershire.

Woodland Flowers

Most of the plants in woodlands grow and flower in Spring. In March, the leaves of the neighbouring trees, usually shading the plant seedlings, have not yet re-grown. This allows more sunlight onto the



Bluebells and celandine are often found in ancient woodlands.

woodland floor and helps plants grow until June, when the tree leaves start to shade the ground again. The plants can survive until the next year because they are adapted

to store energy and use less of it whilst in the shade. Woodland plants need sunlight to survive; leaves trap the sun's energy and convert it into food. Different plants need specific amounts of sun and shade.



Primroses: adding a burst of springtime colour.

Primroses get their name from the Latin "Prima rosa", meaning the first rose of the year.

There are many plants that prefer the shade of woods. Bluebells are one of the most popular flowers associated with woodland. Their violet/blue petals give woodlands a burst of colour, which carpets the woodland floor. They can be seen in ancient woodlands across the Counties.

Artists have been inspired by bluebells for generations, but our natural blue carpets may soon vanish. With half of Britain's woodland gone in the last 50 years, coupled with the



illegal bluebell bulb trade, the nation's favourite flower is in trouble!

The key to the bluebell's success has, in the past, been its early flowering. Global warming can produce warmer winters that let plants such as dandelion and cow parsley grow. These plants then compete with bluebells for sunlight, hampering their growth.

Creepy Crawlies

There are many types of woodland insect to be found in Leicestershire and Rutland. Conservationists know more about some types of insects than they do others. This is partly due to great difficulties in locating them; some are incredibly small, and many species look very similar.

There are over a dozen species of spider which can indicate ancient woodland, as these types are only found in woods formed before 1600 AD.

Due to woodland neglect in the Counties, some species of butterfly have been wiped out in the last 25 years. These include fritillary butterflies, which have been extinct for years in the Counties.

Over 600 types of beetle can be found living in dead, decaying

and rotting trees in British woodland; and 125 types can be found at Buddon Wood in Quorn. Some are only able to survive on (or in) ancient trees; when the trees disappear, so do the beetles. These beetles include some of the most colourful examples of our fauna, such as longhorn beetles.

Oak trees need to be at least 250 years old to support this amount of insects.

The presence of "indicator" beetles in trees at Bradgate Park suggests that these areas have had old trees for many centuries.

Woodland Mammals

There are many animals that use woods as their home, and a lot of these are nocturnal, that is animals that are more active at night.

Badgers can be found at night in many of the Counties' woods. The setts they dig are a series of long winding tunnels; sometimes over 50 metres long. Woodlands are ideal for badgers, as they eat many insects, plant roots, small animals, worms and slugs found in them.

Hedgehogs prefer woodlands to any other habitat, since they are less likely to be disturbed whilst



hibernating in winter. They also eat many woodland insects.

During hibernation, a hedgehog's body temperature drops to as little as 4°C

The common shrew and pygmy shrew are often found close to each other in woods. Their excellent hearing makes up for their poor eyesight whilst hunting for insects, worms and slugs. Shrews do not hibernate, but are still active looking for food under the snow!

The British dormouse is rare in Leicestershire and Rutland. With their striking orange fur and bushy tails, dormice are featured in the local Biodiversity Action Plan as a species of national concern. Dormice prefer hazel coppiced woodlands. The lack of this habitat; coupled with the removal of important hedgerows that dormice use as 'corridors' to travel between different areas, are the main reasons for their rarity. They have a varied diet of nuts, berries, insects, nectar and pollen.

Grey squirrels scamper around in the autumn looking for acorns before hoarding them in tree holes, where they live.



A squirrel nibbling on an acorn.

Woodlands also contain bats, such as the pipistrelle and brown long-eared bats. Hollow trees are ideal places for breeding and hibernation for them, and woodland contains lots of insects to guzzle! Seven species of bat roost in tree hollows during the day. One of them is the noctule, Britain's largest bat, which totally depends on old, hollow trees for breeding and hibernation.

There are 10 species of bat in Leicestershire and Rutland!

Deer Dilemma!

Today, woods in Leicestershire and Rutland are under attack; from fallow deer and muntjacs! The Romans brought fallow deer to Leicestershire when they invaded Britain 2000 years ago.



The muntjac was first introduced to Britain in 1850 at Woburn Safari Park in Bedfordshire; a few escaped and spread. They were first spotted in Leicestershire in the 1950s. Both species damage many coppiced trees. This is a major problem as shoots growing from coppiced trees are a tasty treat for them. Muntjacs also eat bluebell bulbs and other woodland flowers.



A muntjac.

Woodland Birds

Many birds use woodlands to live, feed and breed. The chaffinch breeding season usually begins in March. Males can be heard at this time; their piercing early morning call is used to mark their territory. Robins are known to be found throughout a woodland during the winter months, even though many can now be found in gardens.

Unlike robins, other birds will only occupy certain parts of woodlands. For example, the nuthatch can only be found in high forest areas of woodland. The redstart also needs this type of habitat, and is identified as a primary species in the local Biodiversity Action Plan - due to declining numbers. There are currently only about 10 breeding pairs of redstarts in Leicestershire and Rutland.



*A male Redstart,
a rare species in Britain.*

WHAT ABOUT THE TREES?

There are many types of tree in Leicestershire and Rutland, including ash, oak, alder and lime. Ash trees grow in most parts of Leicestershire, but are not found in Charnwood. Woodlands in Charnwood; such



as Swithland Wood, can be found containing a large number of nationally rare small-leaved lime trees and beautiful oaks. Alder trees are confined to wet woodland habitats, and good examples are found in Skeffington Wood in Harborough.

Some of our rarest and most special wildlife are found only on ancient trees. They are the most important homes for insects in Leicestershire and Rutland.

WOODLAND FOLKLORE & STORIES

William Shakespeare visited Charnwood Forest whilst writing the famous play "King Lear". It is said that he was inspired by the scenery; at the time, the River Soar was known as the River Leire!

The wood of alder trees was a valuable material for making clog-type shoes in the 17th Century. In fact, alderwood was very suitable as it was water resistant and warm to wear - although the comfort of wearing such shoes may have left something to be desired! Today ancient alderwood is rare in Leicestershire.

People living in the late 17th Century used to predict whether the summer months would be wet or dry by the budding of oak and ash trees. A verse was written for this belief:

**Oak before Ash
We'll only have a splash,
Ash before Oak
We're in for a soak**

The wood anemone is another woodland plant that has its own story. Fairies are supposed to have curled up inside them for protection. Medically, they have been used in the past to treat headaches and paralysis. Greek legend says that Anemos, the god of wind, sends wood anemones to show his arrival in early spring.



Wood anemone, also known as Crowfoot and Windflower.

The bluebell is regarded by many people as our national flower. Even though bluebells



are widespread in parts of England, they are a globally important species; as they are confined to parts of Northern Europe.

There is a large concentration of 'Bluebell' pubs in the East Midlands. Leicestershire's love for them extends to Swithland Wood's annual bluebell ceremony, which celebrates the beauty of these popular flowers.



A carpet of bluebells.

Recently, Welsh scientists have found that bluebells contain an animal-repelling chemical similar to another being tested for its use in the battle against cancer and HIV.

WHAT YOU CAN DO TO HELP

Woodland conservation isn't just for the experts. Everyone can give nature a helping hand. The first step towards protecting existing woodlands in

Leicestershire and Rutland is to describe what is living in them.



Members of the public enjoying a woodland.

Enclosed is an easy to use Wooded Wonders survey form. By visiting your local woodlands you can explore and discover many types of wildlife. Remember, no two woods are identical, so also look out for interesting features which give a sense of character to the area.

You may want to record a woodland in your own way. You could make a photographic record, or if you have artistic talents, paint a picture of your favourite part of your local woodland. Scrapbooks can also be made to give your own personal touch to recording a woodland.

Your completed survey forms will help the future conservation of our local woodlands. The information you give us will be entered onto a database and will



serve as a useful aid in assessing the needs of Leicestershire's and Rutland's woodlands.

It will be used to help assess the most important woods in the Counties. Action can then be taken to ensure these priority woods get the help they need. Targets to increase the amount of woodland in Leicestershire and Rutland may also be calculated if we can find out about all of our local wooded areas.

FOR YOUR OWN SAFETY

Discovering your local woodlands should be a fun and interesting activity. However, it is also very important that you are careful when surveying woods. Below are some guidelines to help you have both a safe and enjoyable adventure:

- Never venture into woods on your own. Always survey with a friend.
- Watch your footing as most woodland floors are uneven.
- Never enter a wood if there is a thunderstorm in the area. Check local weather reports for information. Remember - if in doubt, don't go out!

- Be aware that some woods are commercially used for game shooting, tree felling, charcoaling etc. and should be checked before entering safely.
- Do not remove or try to disturb anything in a wood, this can damage important wildlife.
- Always tell a friend or relative exactly where you are going before you visit a woodland; if you do get lost in a wood you can be assured that someone knows of your whereabouts.
- Allow yourself plenty of time to get out of a wood before it gets too dark to find a way out. Carry a good torch with spare batteries at all times, as the woodland canopy may block out a lot of sunlight.
- Wear suitable outdoor clothing. Comfort, dryness and warmth are the things which you should consider before you go out.
- Take a First Aid Kit with you, in case you get a bump or scratch.
- Make sure your tetanus booster is up to date.



Important Rules For Surveying

Most woodlands in Leicestershire and Rutland are privately owned. In these cases it is essential that you get the landowner's permission - if you don't you may be liable to prosecution for trespassing. If you do need to contact a landowner, contact can be made with the help of the local Parish Council in which the woodland is based.

- Plant / insect identification guides (if needed).
- A watch.
- Maps to help locate woods.
- A First Aid Kit
- A tape measure, to measure larger trees. (Further explained on the survey form)
- A camera (This is optional, but may prove useful - some features may be hard to describe in words).



A typical woodland opening

FURTHER INFORMATION

There are many interesting and detailed books available on woodlands. Below is just a small selection:

Squires, A. and Jeeves, M.
Leicestershire and Rutland Woodlands Past and Present
Kairos Press, Leicestershire. 1994

Peterken, G.
Woodland Conservation and Management
Chapman and Hall, London. 1981

Rackham, O.
Ancient Woodland - its history, vegetation and uses in England
Arnold. 1980

BEFORE YOU LEAVE HOME

You will need to take a few useful things with you on your Wooded Wonders adventure:

- Your Wooded Wonders survey form.
- Suitable outdoor clothing.
- A torch (with spare batteries).



Tree Girths:

If you find trees that appear to be at least 1 metre (3' 3") wide, please measure the **GIRTH** of the trees at 1.3 metres (about chest height) from the ground:

1.	m.	Species: _____	5.	m.	Species: _____
2.	m.	Species: _____	6.	m.	Species: _____
3.	m.	Species: _____	7.	m.	Species: _____
4.	m.	Species: _____	8.	m.	Species: _____

If possible, please mark their positions on a map.

Wildlife:

Please note any wildlife seen:

*Thank you for completing this survey.
The information from the survey will be entered onto our ecological database,
helping us to protect the woodlands in Leicestershire and Rutland.
If you wish to survey other woodlands then simply photocopy the form.*

Please return completed survey forms to:
**Community Heritage Initiative,
Holly Hayes Environment and Heritage Resources Centre,
216 Birstall Road, Birstall, Leicestershire LE4 4DG.**

Wooded Wonders Survey Form

About You:

Name: _____

Address: _____

Post Code: _____

Date Of Survey: _____

Woodland Details:

Parish: _____

OS Grid Reference (if known): _____

General Woodland Location: _____

Surrounding Landuse and Habitats:

At the edge of the woodland, how wide are the rides? _____ m.

What do the rides consist of? (e.g. grass, hard-core, overgrowth) _____

Features:

Are there any bluebell colonies in the woodland?

YES/NO (Delete as applicable)

If YES, roughly how large are the colonies in total? _____

Is there a pond in the woodland?

YES/NO (Delete as applicable)

Is there a stream in the woodland?

YES/NO (Delete as applicable)

Is there a spring in the woodland?

YES/NO (Delete as applicable)

Species Of Trees Present:

Ash

Oak

Alder

Willow

Lime

Yew

Elm

Beech

Other (please specify) _____

Which species is most common? _____

Tree Heights:

Are most of the trees roughly the same height? YES/NO

If YES, roughly how tall are they? _____

Contacts

**Community Heritage Initiative,
Leicestershire County Council,**
Holly Hayes Environment and Heritage Resources Centre,
216 Birstall Road, Birstall, Leicestershire LE4 4DG.
Tel: (0116) 267 1377

The Leicestershire and Rutland Wildlife Trust,
Brocks Hill Environment Centre,
Washbrook Lane, Oadby, Leicester LE2 5JJ.
Tel: (0116) 272 0444



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