

By **The Open University** with **Hedgelinek**

Introduction

Biodiversity is the variety of life. Hedgerows can be important havens for this, both in the countryside and in our cities. We want to look at the condition of our hedges and see if some are better than others for wildlife. For example, are hedges in the countryside home to more plants and animals than ones in urban areas? Which hedges support the most biodiversity?


By taking part in the OPAL Biodiversity Survey and contributing your results, you can help us find out more about the hedges in your local area and you can learn more about this habitat and its importance to wildlife.

About the Biodiversity Survey

There are four activities in the Survey:

- **Activity 1** What does the hedge look like?
- **Activity 2** Is the hedge a source of food for wildlife?
- **Activity 3** What wildlife can you find?
- **Activity 4** What else is living in the hedge?

Please do Activity 1 and as many of the others as you can.

Instructions for carrying out all the activities are found in this guide. The workbook contains more background information and space to write down your results. This symbol  shows you when you need to write something down.

The survey starts here

You will need

- **This field guide, the workbook and the guide to common invertebrates in hedges.**
- **A tape measure.**
- **A pale-coloured collecting container** to catch any invertebrates which fall from the hedge. You could use a tray, sheet or large piece of paper, or alternatively **a dustpan and brush** to sweep invertebrates off the hedge.



Useful items to take outside (if you have them)

- A map and/or Global Positioning System (GPS) device if available.
- A mobile phone (in case of emergencies).
- A camera.
- A spy pot – see page 6 of the Field Notebook.
- A pooter – see page 6 of the Field Notebook.

Remember – please be careful not to harm the environment or any wildlife you find. When you have identified the invertebrates, carefully return them to where they were found. When you have finished your survey, please take all your equipment home with you.

Safe fieldwork

Exploring hedges is great fun. However, it is important to be safe especially near roads.

- Young children must be supervised as hedges may have prickles and thorns.
- Do not do this survey on your own.
- If you find broken glass, litter with sharp edges or other undesirable objects find another spot to do the survey.
- Cover any open cuts before starting and wash your hands thoroughly afterwards and especially before eating.

More safety guidance can be found on page 5 of the Field Notebook. Read this before you start.

Choosing a hedge

If you don't know of one near you, there are some ideas on page 4 of the Field Notebook to help you. Make sure that you have the landowner's permission if required.



Marking out the start and end of the 3 m stretch

Choose a 3 metre stretch which is typical of the whole hedge. Mark out the start and end of the 3 m stretch before you start the activities.

Activity 1: What does the hedge look like?

15 minutes

Record information about the hedge by answering Questions **1-15** on pages 10-12 of the Field Notebook. Use the photographs on the other side of this guide to help you.

You could also take a photograph of your hedge and upload it with your results to the OPAL website.

Activity 2: Is the hedge a source of food for wildlife?

10 minutes

Use the images on the other side of this guide to help you identify the shrubs you find in the hedge.

Record your findings on page 12 of the Field Notebook (Question **16**).

Estimate the total number of flowers, berries and nuts within the 3 m stretch of hedge.



Estimate the amount of food in the hedge

Be aware that some of the berries are poisonous to humans.

Record your findings on page 12 of the Field Notebook (Question **17**).

If you are not sure of an identification then post a description, ideally with a photograph, on www.iSpot.org.uk and someone will help you to identify it.

Activity 3: What wildlife can you find?

15 minutes

Catching the invertebrates

You can catch invertebrates in the hedge by

1 Either gently shaking the branches above your container so that the invertebrates fall in



Using a pale-coloured container

2 Or using **a dustpan and brush** to gently sweep the outer leaves of the hedge to knock the invertebrates into the dustpan



Using a dustpan and brush

Take care not to disturb nesting birds.

Identifying the invertebrates

Use the [guide to common invertebrates in hedges](#) chart to help identify what you have found.

Record your findings on page 13 of the Field Notebook (Question **18**).

If you are not sure of an identification then post a description, ideally with a photo, to www.iSpot.org.uk and someone will try to help you name it. If you have not got a photograph then please give as much information as possible, (especially if it has wings, the number of legs, the colour and any special markings).

Activity 4: What else is using the hedge?

10 minutes

Use the tape measure in your pack to measure the size of all holes in the ground along your stretch of hedge.



Measuring holes along the hedge

Record your findings on page 13 of the workbook (Question **19**).

Record any animals (other than invertebrates) or plants you identify (Question **20**). You can either name the species or simply put 'bird' or 'mouse'.

Now complete your survey

To complete the survey, either enter your results on the OPAL website www.OPALexplorenature.org, or send your recording sheets back to us by using the Freepost address given on page 6 of the workbook.

The results will be used to calculate an index of your hedge's importance for wildlife. If you enter your results online this information will appear instantly. As the survey progresses, more results will be added, so please return to the web page regularly to see how your hedge compares.

Thank you for taking part and adding your results to the OPAL Biodiversity Survey.

The survey ends here

What do your results mean?

The activities in the OPAL Biodiversity Survey tell us about the importance of hedges for wildlife. A national survey like this has not been done before so your results will help us find out more about hedges throughout England.

You may have collected information from a hedge that has never been investigated before, especially if it is in an urban area.

Activity 1 is designed to collect information about the size, location, surroundings and management of each hedge. A score will be calculated from your results to show the condition of the hedge. For wildlife the ideal is a continuous, dense hedge of bushes with occasional trees. The bushes provide cover and food for small birds, mammals and invertebrates; whilst the trees provide nesting sites for larger birds and protection for a range of invertebrates. Hedges which are cut too often, or not often enough, have greatly reduced leaf and berry production.

Activity 2 assesses the importance of the hedge as a food source for animals. An estimate of the quantity of food produced by the hedge will be made based on the amount of berry- and nut-bearing species present and the condition of the hedge. Some animals and plants are only found where certain hedge bushes grow.

Activity 3 shows what invertebrates are living in the hedge. The invertebrates you find can be a food source for birds, mammals and other invertebrates. Although we have chosen the most common types of invertebrate found when sampling a hedge, it is possible you will find many creatures that are not in our guide. For more help with identification, use iSpot www.iSpot.org.uk.

Activity 4 assesses the importance of the hedge as a source of shelter and protection. Different animals make holes of different sizes. A hole under 2 cm in diameter is likely to have been made by an insect, 2 – 5 cm by a mouse or vole, 5 – 10 cm by a rat, 10 – 30 cm by a rabbit and over 30 cm by a fox or badger.



Open Air Laboratories (OPAL) is about inspiring people to spend more time outdoors exploring the natural world around them. We want to encourage and support people of all ages, abilities and backgrounds to enjoy and study wildlife in their local area and to observe and record information about the local environment.

OPAL's research and education programme is delivered through a network of organisations, providing resources, training and events. To find out more please visit our website: www.OPALexplorenature.org.

Credits

Text: Graham Banwell¹, Martin Harvey¹, Jenny Worthington¹, Jonathan Silvertown¹, Janice Ansine¹, Rob Wolton², Jim Jones³, Linda Davies⁴, Roger Fradera⁴, Gill Stevens⁵, Simon Norman⁶.
Photographs: Graham Banwell, Simon Norman, Jim Jones, Gill Stevens, iStockphoto.
¹Open University, ²Hedgelinek, ³PTES ⁴Imperial College London, ⁵Natural History Museum, ⁶Field Studies Council.
© OPAL 2010, 2013. All rights reserved.

Describe the structure of the hedge

Extra information to help you with Activity 1: Question 9



a. Line of bushes



b. Line of trees



c. Bushes and trees

Are there gaps in the hedge?

Extra information to help you with Activity 1: Question 10



a. No gaps



b. A few gaps



c. More gaps than hedge



Describe the shape of the hedge

Extra information to help you with Activity 1: Question 11



a. Neatly trimmed - regularly cut, often found in gardens



b. Untrimmed - straggly hedge, with many long thin branches growing from the top



c. Heavily cut - narrow hedge with thick branches cut, broken or torn



d. Leggy - top-heavy hedge, branches start bushing out at 50 cm above the ground



e. Laid - the hedge looks as if each bush has been pushed over and pinned down, with the main trunks horizontal along the ground, not vertical
or
Coppiced - the hedge has been cut back almost to ground level (these are both ways of maintaining thick, gap-free hedges)



Is the hedge a source of food for wildlife?

Extra information to help you with Activity 2



Beech – *Fagus sylvatica*

Leaves green, brown or purple



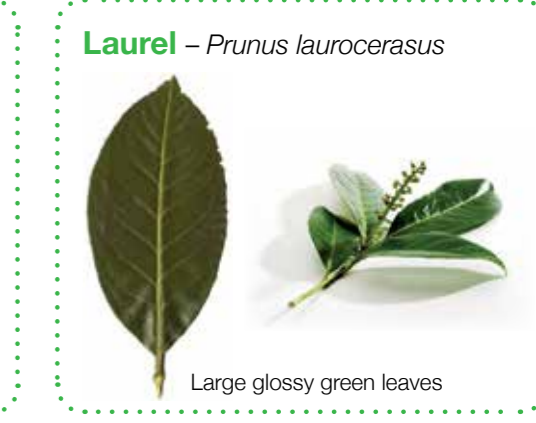
Dog Rose – *Rosa canina*

Trailing stems, hook-shaped thorns



Hazel – *Corylus avellana*

Twigs pale brown, catkins in spring



Laurel – *Prunus laurocerasus*

Large glossy green leaves



Bramble – *Rubus fruticosus*

Sharp prickles on stem



Elder – *Sambucus nigra*

New twigs pale yellow



Holly – *Ilex aquifolium*

Not all leaves toothed



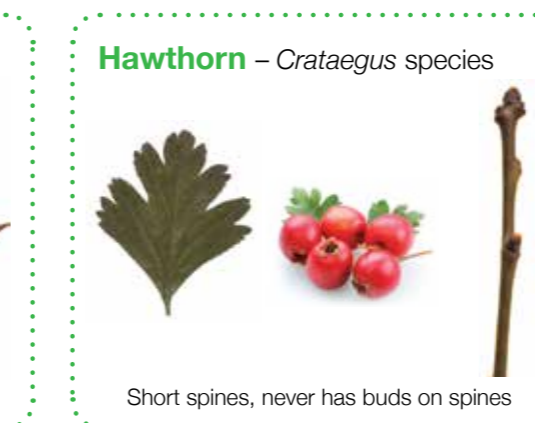
Privet – *Ligustrum* species

Narrow shiny green leaves



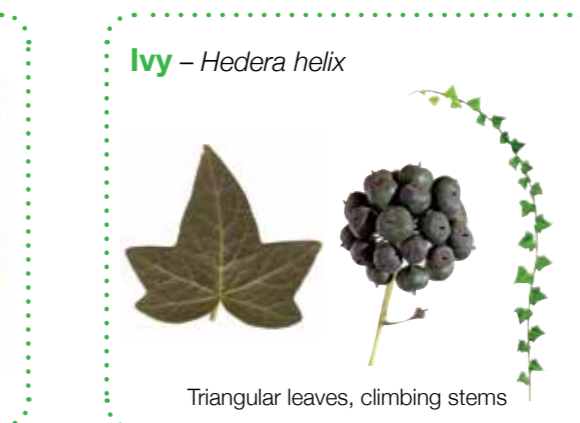
Blackthorn – *Prunus spinosa*

Long spines, can have buds on spines



Hawthorn – *Crataegus* species

Short spines, never has buds on spines



Ivy – *Hedera helix*

Triangular leaves, climbing stems



Yew – *Taxus baccata*

Evergreen with needles

