

Nature Detectives Investigate..



The Craigs Nature Trail

LEVEL 3 BLUE

WORKSHEETS 1- 9

Using your investigative skills, find the missing clues from information around the site, to complete these mysteries.

THE CRAIGS NATURE TRAIL

Level 3. Blue

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Earthworms



Earthworms may be found in every type of soil on earth, unless it does not have enough [redacted] or [redacted] - and will die if their skin dries out.

However, they also don't live in places where there is too much [redacted]; and that is why, earthworms can be seen coming out in the [redacted]

There are more than [redacted] known types of earthworms in the world, with sizes ranging from few inches to 2-3 meters, and in colours like purple, reddish brown, and bright blue.

Earthworms are sometimes eaten by [redacted] or used as bait to catch fish. Yum, yum!

They primarily feed on decaying plants. They also obtain their food from the ground in which they burrow. They use large amounts of soil and small pebbles to grind and extract the organic stuff that is needed as nutrition. They store all nutrients in this gastric mill and deposit the waste material outside their burrow. An earthworm can take in and pulverizes food equal to its own [redacted], everyday.

Earthworms do not have [redacted] but have organs known as the 'aortic arch'.

They have five aortic arches, and in between each one, there is a gland that helps the worm digest calcium which is absorbed after eating lots of dirt.

They help to pump blood around the body, and don't have any chambers.

Earthworms also don't have lungs, and breathe through the [redacted] which takes in oxygen and releases carbon dioxide.



Earthworms are considered good friends of farmers and gardeners and have proved to be very helpful in agriculture.

They till the ground and create [redacted] that allow air and moisture to pass through, which in turn, helps in the healthy growth of plants.

Tunnels store water that can be used by plants and also allow the air to pass, which causes [redacted] to break down organic matter within the soil.

The reproductive system of earthworms is totally different from other insects and animals. An earthworm can be a father and a mother, as every earthworm is a 'hermaphrodite', which means it has both male and female sex organs.

Earthworms don't have [redacted] but are still able to sense [redacted] However, they can't bear light and are paralyzed if exposed to it for a longer time.

LADYBIRD (*Coccinellidae*)



The name "ladybird" originated in [redacted] where the insects became known as "Our Lady's bird" or the "Lady [redacted]".

Coccinellids are small insects, ranging from 1 mm to 10 mm (0.04 to 0.4 inches), and are commonly yellow, [redacted], or scarlet with small black spots on their wing covers, with black legs, head and antennae.

They are found worldwide, with over [redacted] species identified, (with more than 450 native to North America alone).

Ladybirds are generally considered [redacted] insects, as many species feed on [redacted], (such as greenfly) which are pests in gardens, agricultural fields, and orchards.

Ladybirds are often brightly coloured to scare away potential [redacted]. This works because predators learn by experience to associate certain prey with a bad taste. Ladybirds are known to spray a [redacted] that is venomous to certain mammals and other insects when they are threatened.

The most commonly recorded species was the 7-spot, closely followed by the Asian Harlequin — an invader that arrived from continental Europe in 2003 after being introduced to control pests.

Total life span is [redacted] years on average.



A common [redacted] is that the number of spots on the insect's back indicates its age.

GREY HERON



Overview

Grey herons are unmistakable: [redacted] with long legs, a long beak and grey, black and white feathering. They can stand with their neck stretched out, looking for food, or hunched down with their neck bent over their chest.

Where to see them

Around any kind of water – [redacted] and even on estuaries. Sometimes, grey herons circle high up into the sky and can be mistaken for large birds of prey.

When to see them

At any time of year – our grey herons [redacted].

What they eat

Lots of [redacted] but also small birds such as [redacted], small mammals like voles, and amphibians. After harvesting, grey herons can sometimes be seen in fields, looking for rodents.

Estimated numbers

Europe	UK breeding*	UK wintering*	UK passage*
-	[redacted] nests	-	-

* UK breeding is the number of pairs breeding annually. UK wintering is the number of individuals present from October to March. UK passage is the number of individuals passing through on migration in spring and/or autumn.

MAGPIE



Overview

Magpies seem to be jacks of all trades – [redacted], predators and pest-destroyers, their challenging, almost arrogant attitude has won them few friends. With its noisy [redacted], black-and-white [redacted] and long tail, there is nothing else quite like the magpie in the UK. When seen close-up its black plumage takes on an altogether more colourful hue with a purplish-blue iridescent sheen to the wing feathers, and a green gloss to the tail. Non-breeding birds will gather together in flocks.

Where to see them

Found across England, Wales and N Ireland, but more localised in Scotland, absent from [redacted]. Seen in a range of habitats from lowland farmland to upland moors.

When to see them

All year round.

What they eat

[redacted] and [redacted].

Estimated numbers

Europe	UK breeding*	UK wintering*	UK passage*
-	650,000 territories	-	-

* UK breeding is the number of pairs breeding annually. UK wintering is the number of individuals present from October to March. UK passage is the number of individuals passing through on migration in spring and/or autumn.

SWIFT



Overview

The swift is a medium-sized aerial bird, which is a superb flier. It even on the wing! It is plain sooty brown, but in flight against the sky it appears black. It has long, scythe-like wings and a short, forked tail. It is a visitor, breeding across the UK, but most numerous in the south and east. It winters in .

Where to see them

Look up in the sky in summer, often very high. They never perch on wires like swallows. You might see excited screaming parties of them careering madly at high speed around rooftops and houses, often low, especially towards dusk.

When to see them

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What they eat

and airborne .

Estimated numbers

Europe	UK breeding*	UK wintering*	UK passage*
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-	85,000 pairs	-	-
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* UK breeding is the number of pairs breeding annually. UK wintering is the number of individuals present from October to March. UK passage is the number of individuals passing through on migration in spring and/or autumn.

Dandelion (*Taraxacum officinale*)

The plant's name comes from the shape of its leaves and derives from the French phrase [redacted], or lion's tooth.



Dandelions are perennial plants that grow best in full sun with moist soil. Once the plant is established though, it can handle shade and water deprivation. The plant bears bright yellow, round flowers and leaves that have a tooth-like shape.

The roots of the dandelion can extend as far as [redacted] into the ground, though they are usually only 150mm to 500mm deep. Any broken parts of the plant excrete a [redacted] [redacted] [redacted].

After dandelion seeds are carried away from the plants by the wind, they can fly for miles. After landing, the seeds can sprout right on the soil's surface at any time of year, which allows new plants to grow easily

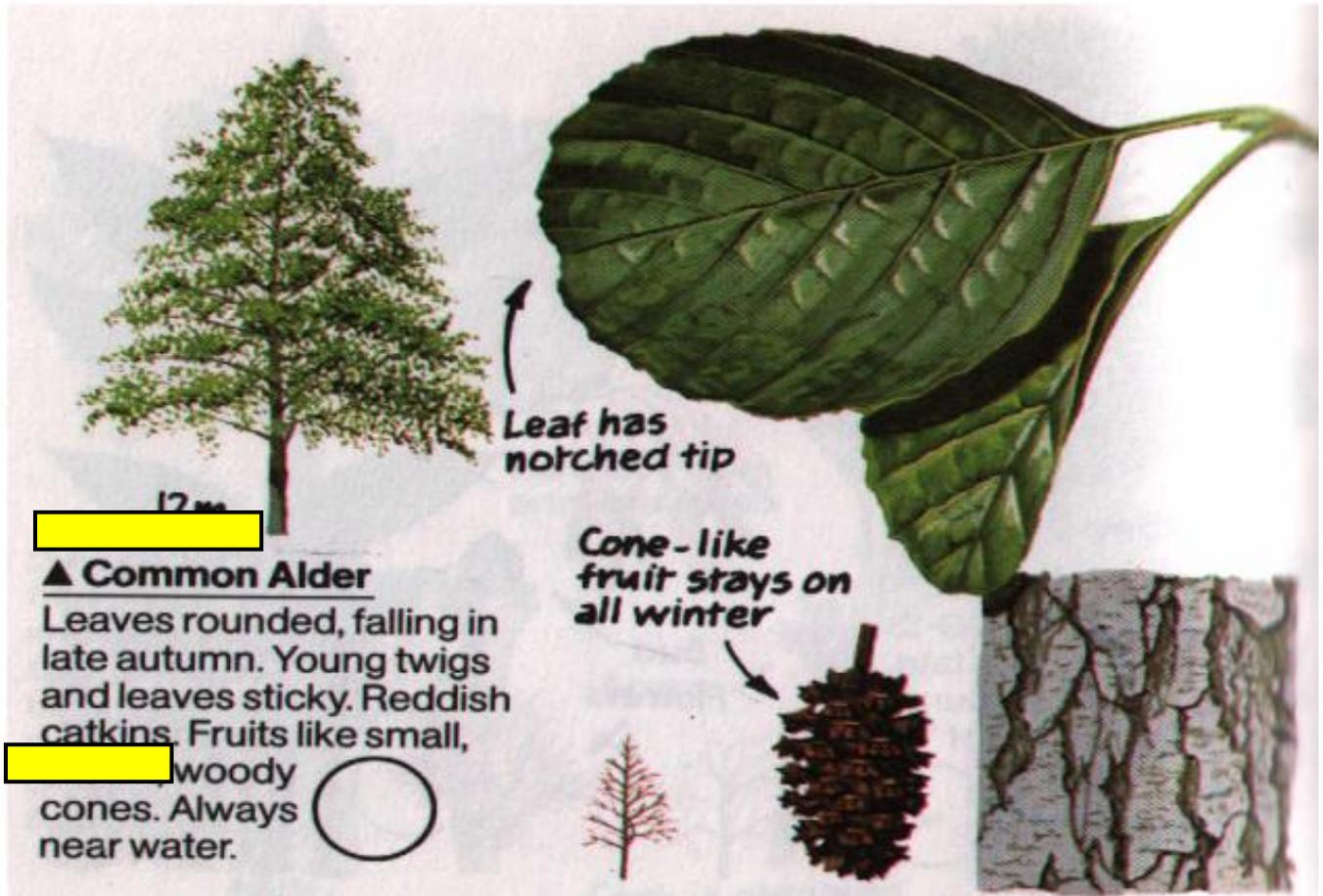


Dandelions have many culinary uses. All parts of the plant can be [redacted], including as part of [redacted] cooked or even fried. Dried dandelions are used to make [redacted] and the flowers can be turned into [redacted].

The white sap of the plant can also be used to improve skin complexion and to help heal skin blemishes such as [redacted], but may also irritate sensitive skin.



Dandelions are rich in beta carotene, iron, calcium and vitamin [redacted]. They are known as an effective [redacted], and have traditionally been used to help in the treatment of the [redacted] and gallbladder, including aiding in removing gall stones and helping to decrease liver swelling. Dandelion can also help with minor [redacted]



Conifers



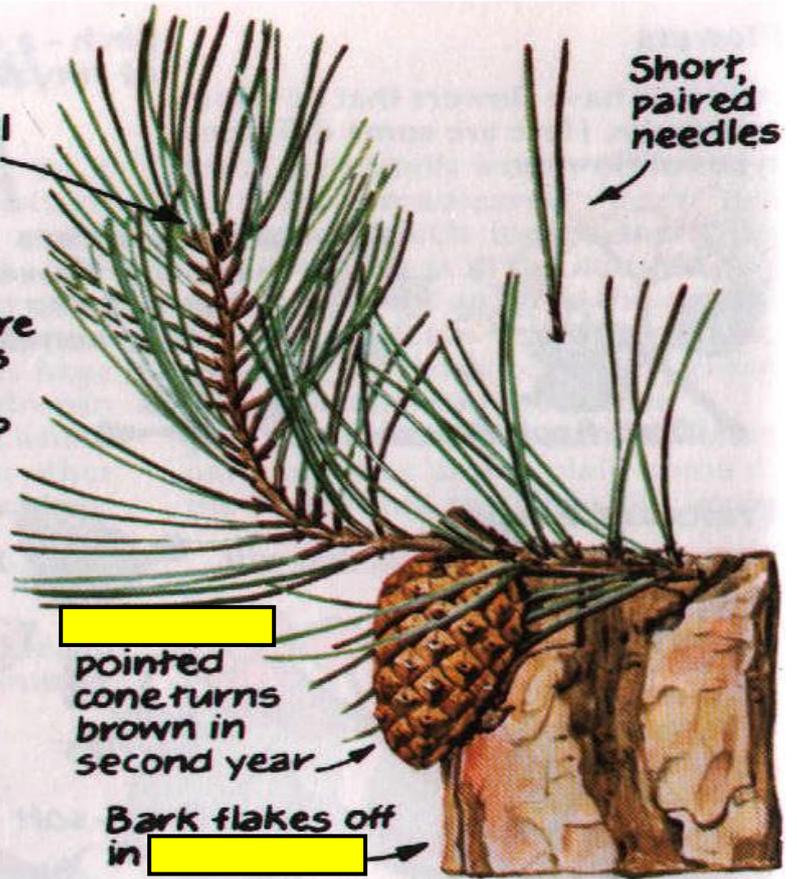
Long, bare trunk is red near top of tree



▲ Scots Pine

Short, blue-green, paired needles. Small pointed buds. Upper bark red, but grey and furrowed below. Young tree

becoming flat-topped with



Small bud

Short, paired needles

pointed cone turns brown in second year

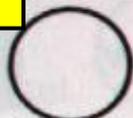
Bark flakes off in



40m

Fir

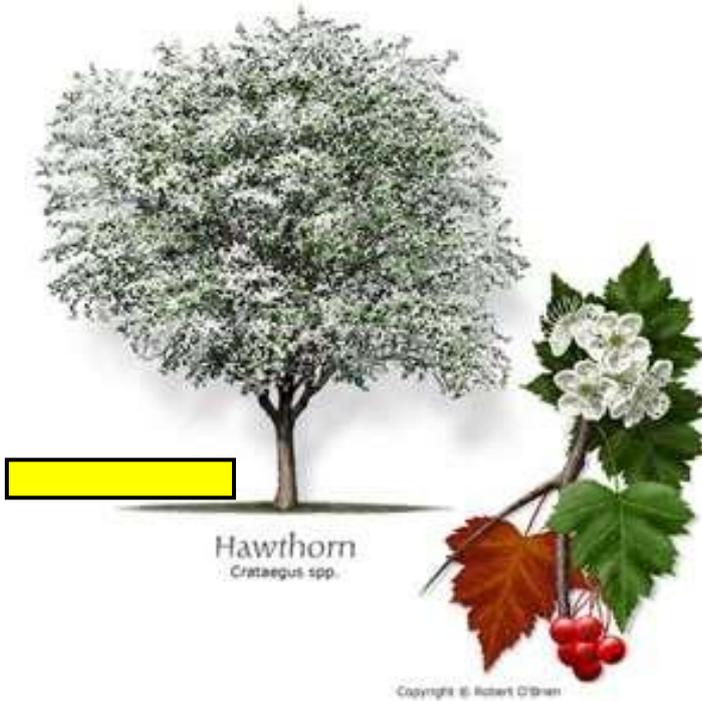
Soft fragrant Long-pointed, copper-brown buds. Light brown, hanging with three-pointed Old bark is thick and corky.



Beech-like bud

Needles are parted on twig

Hawthorn *Crataegus* (commonly called Hawthorn or [redacted])



Native to temperate regions of the Northern Hemisphere in [redacted], [redacted] and North America.

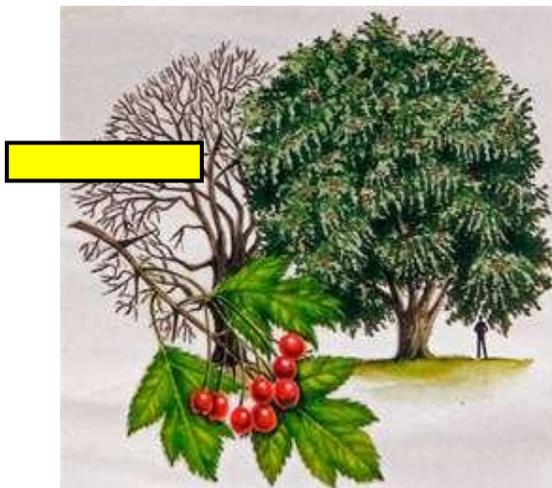
They are shrubs or small trees, mostly growing about 5-15 metres (16–49 ft) tall, with small berries and thorny branches.

The thorns are small sharp-tipped branches that arise either from other branches or from the trunk, and are typically 1–3 cm long.

The Common Hawthorn is extensively used in Europe as a hedge plant.

Hawthorns provide [redacted] and shelter for many species of birds and mammals, and the [redacted] is important for many nectar-feeding insects. Hawthorns are also used as food plants by the [redacted] of a large number of [redacted] and [redacted].

The fruit, sometimes known as a [redacted] [redacted] are important for wildlife in winter, particularly thrushes. These birds eat the fruit and disperse the seeds in their droppings.



'Ne'er cast a [redacted] till (the) [redacted] is oot'

There is a popular belief that this saying refers to the timing of the flowers on the Hawthorn tree, which traditionally bloom in May.