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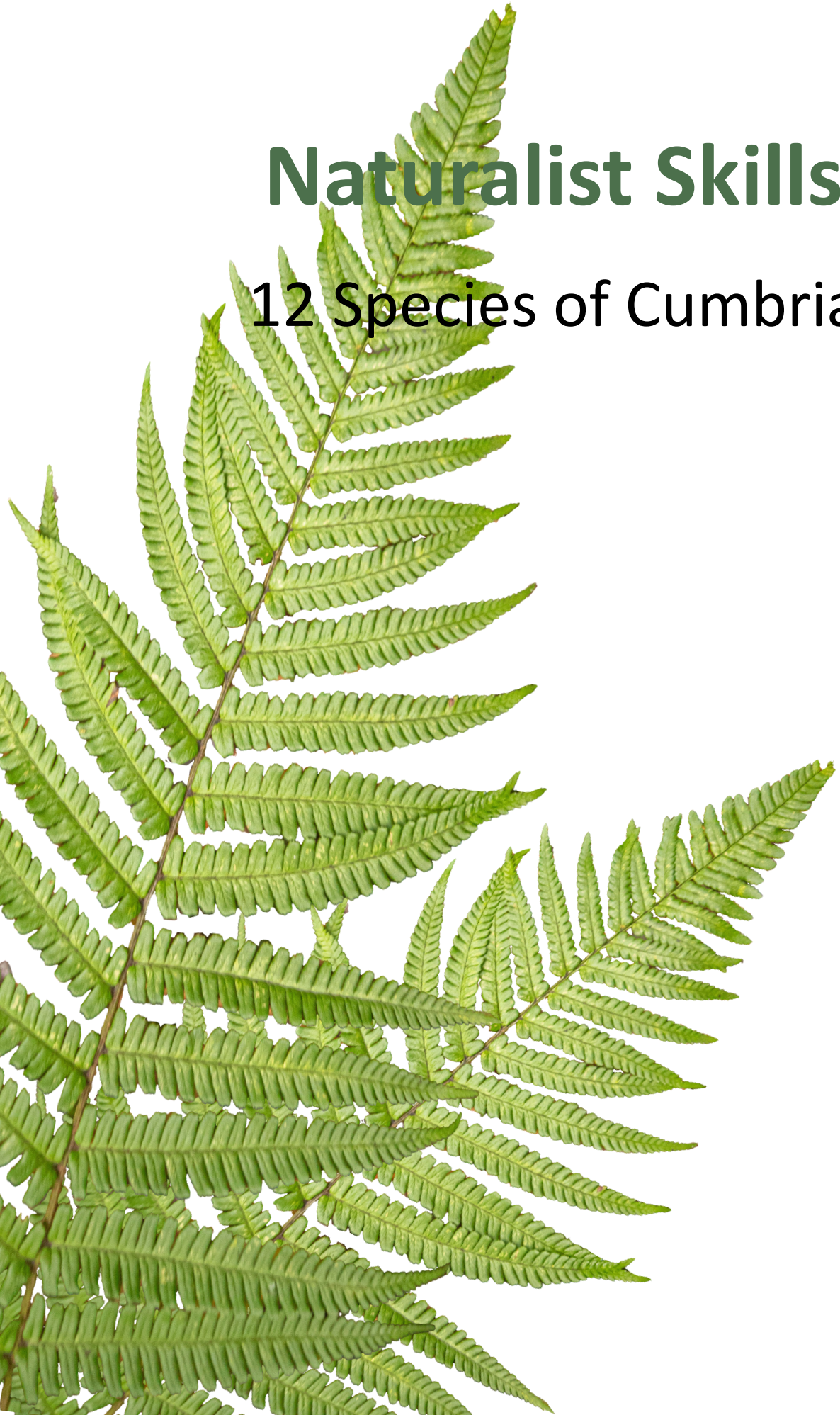

Naturalist Skills

12 Species of Cumbria

Contents

Species List

How to use this Book

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b) Plant 3

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References

Listed Species **Pages 36-41**



Yellow Stagshorn *Calocera viscosa*



Very Common, Not edible

Yellow Staghorn Distribution



Map from iNaturalist

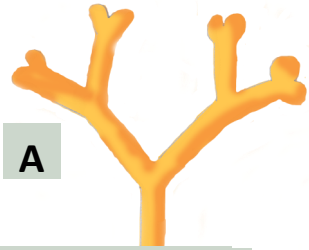
Found in most of England, Scotland and parts of Ireland.

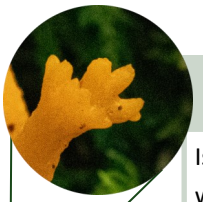
Worldwide- Is found in most of Europe and parts of the United States.

Inaturalist.org

Deep golden to Orange-yellow

Bright orange-yellow when wet and can become orange-red in dry weather.



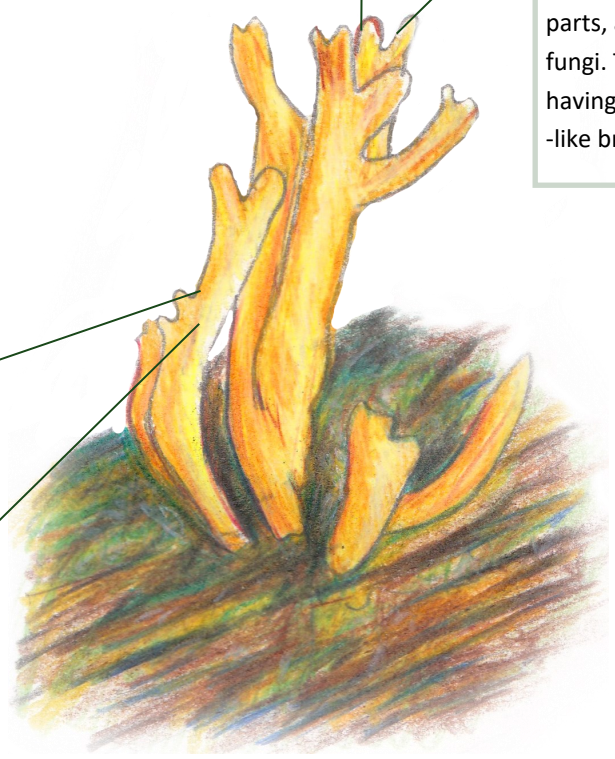


Antler-like Branches

Is **dichotomously branched** which means it divides itself into two distinct parts, at the tips of the fungi. This is also known as having forked-tips or antler -like branches (A)

Fruit Body 3-10cm

Lifesize



Greasy in Texture



Distinctive feature is the sticky or greasy texture. This is also where it gets its scientific name **"viscosa"** which means greasy.

Habitat

Grows on **rotting wood** of **conifer** stumps, branches and roots in autumn. Fruit bodies are very firmly attached and have a lot of the fruit body buried within its host **(First Nature, 1995-2024).**

Calocera viscosa meaning

Calo—means beautiful

Cera– comes from ancient Greek and means *"like wax"* so Calocera translates to *"beautiful and waxy".*

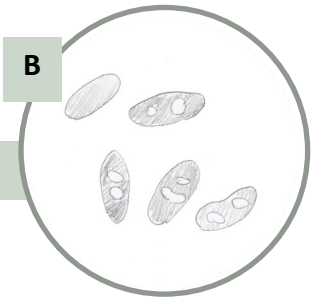
Viscosa– *Simply means sticky or greasy.*

(First Nature, 1995-2024)

Description

Yellow Stagshorn Fungi *Calocera viscosa* also known as “Jelly Antler” is in the jelly fungi family Clavariaceae **(Sharp, 2021).** Key Identification features of this fungi are it’s sticky/greasy texture, antler-like yellow/orange branches and its hard structure unlike its Coral Fungi look alike which is soft.

Yellow Stagshorn is especially sticky after it rains and is tough and can be red when dry **(WildfoodUK, No date).**



Spores

Spores are sausage shaped with two oil drops on and has white spore print (B).

(First Nature, 1995-2024)

Similar Species

Confused with yellow-orange species of Coral *Fungi Ramaria. Key separation feature would be* that Coral Fungi lack the greasy, sticky texture that Yellow Stagshorn has.



Grows on Conifers

Likes pine and spruce trees regardless if they are in a forest or not. Can sometimes be found in woodchip too. (**WildFoodUK, No date)**



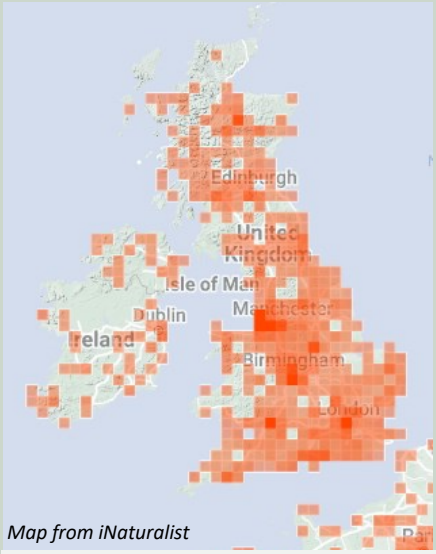
Location—This one was found in the damp woodland of Gelt Wood near Brampton.

Silver Birch *Betula pendula*



Very Common

Silver Birch Distribution



Map from iNaturalist

Common and found in most of UK apart from the high peaks of Scotland and parts of Wales.

Worldwide—Is found across Europe, Asia and North America.

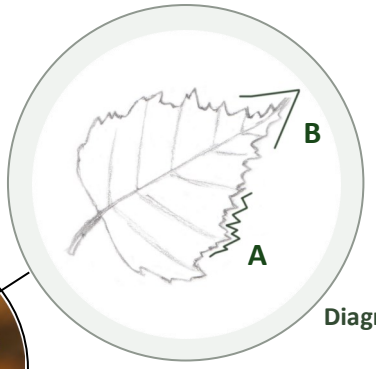
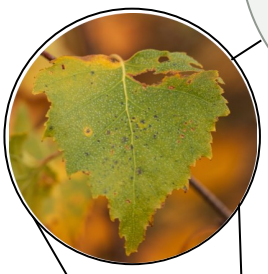


Diagram 1



Leaf Shape

A] Teeth on Silver Birch are double toothed (not all the same size) rather than being all the same size.

B] End of leaf is very pointed into a triangle at the tip, angle is less than 90°.



Female Catkins



Male Catkins

Catkins

Both male and female catkins can be found on the same tree.

Male catkins are long and yellow brown and hang in groups of two to four. While female catkins are short and green **(Woodland Trust, no date).**



Bark

Bark is characterized by dark diamond shapes (for gas exchange) and pale white or silver smooth papery bark.

Description

The Silver Birch has been growing across the UK since the end of the last ice age over 11,000 years ago. (**Kew, No date).** These trees are widespread and common in the UK and around the world and grow all across Europe, Asia and parts of North America.

The Silver Birch is a 'pioneer species' meaning that they are one of the first species to colonize a barren or new environment. They can do this because of their wind-blown seeds which can spread and grow in new ground (**Kew, No date)**.

Silver Birch is a deciduous tree which is characterized by their silvery/white smooth bark which has dark diamond-shaped cracks or splits within it. Mature trees have more deepen dark cracks in their bark while young trees have a shiny brown bark. The twigs of a Silver Birch are smooth with small warts on them and tend to droop down more than Its relative the Downy Birch Betula pubescens. In autumn the leaves turn from light green to a yellow/brown. "When mature these trees can reach 30m in height" (**Woodland Trust, No Date)**.

Winter Twigs and Buds

Alternate

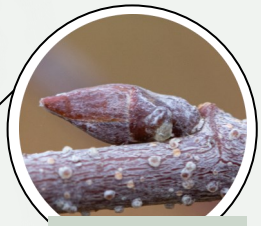


Diagram 2

Diagram 3



Twig Warts



Buds

Buds

Buds are pointed.

Twig Warts

The twigs are hairless and have small light-coloured warts on them. This is more obvious in younger of new grown.

Twig structure (Diagram 2)

The twig structure is "alternate" meaning the twig is like a zig zag shape with buds alternatively positioned to each other (not opposite). The twig ends of a Silver Birch are also more droopier than its relative the Downy Birch.

Habitat

The Silver Birch grows in moist to dry soils which are mainly acid but will grow in more basic soils if required. It is mostly found at lower altitudes in lowland woodlands, downs and heaths.

NVC W10-11 and W16-18 (**Averis, 2013)**

Examples of Habitat Silver Birch is Found



Whisby Nature Park, Lincolnshire

Lowland Oak and Birch Woodland– NVC W16



Miltonrigg Wood, Cumbria

UKHAB– Mixed Woodland W1h5



Drumburgh Moss, Cumbria

Dry Heathland NVC H4, H8, UKBAP Dry Heaths, lowland h1a5

Similar Species

Confused with **Downy Birch** *Betula pubescens*

Leaf shape_ *Diagram 2*

Leaf shape is more rounded than Silver Birch

C] Blunt pointed tip, obtuse angle (bigger than 90°).

D] Single toothed (teeth all the same size).

E] Leaf stalks have downy hairs on.

"Leaves are downy below" **(Rose, 1981)**

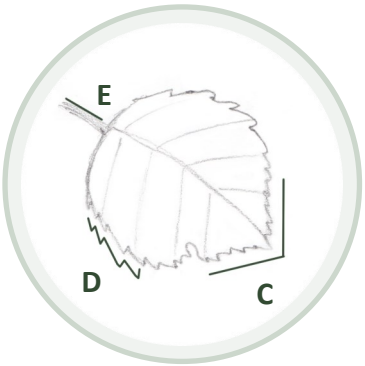


Diagram 2



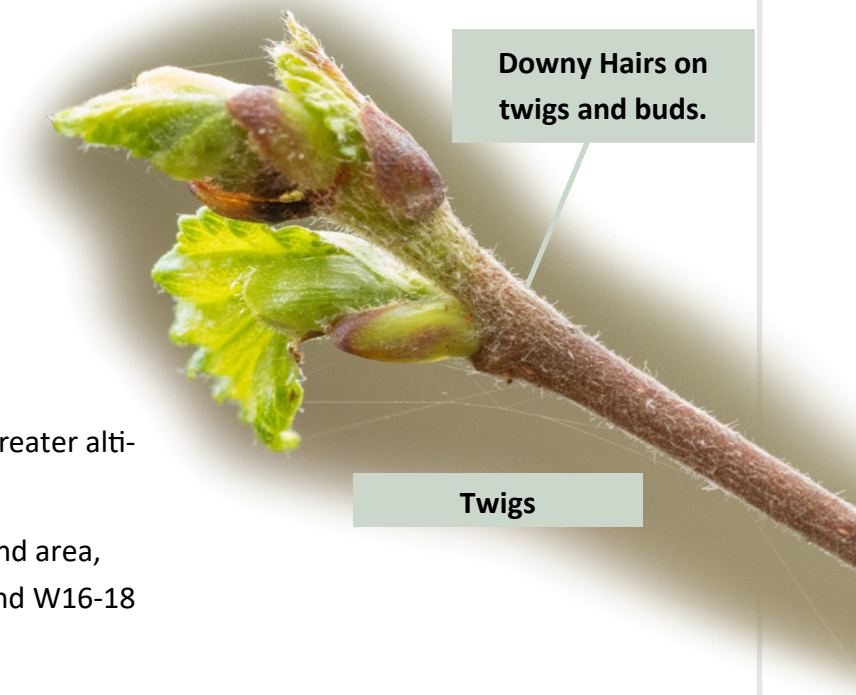
Bark

Bark

Bark is less white than the Silver Birch and has more of a brownish peeling bark **(Rose, 1981)**.

Twigs

Twigs are downy with small hairs.



Downy Hairs on twigs and buds.

Twigs

Habitat

The Downy Birch grows in wetter soils and at a greater altitude than the Silver Birch.

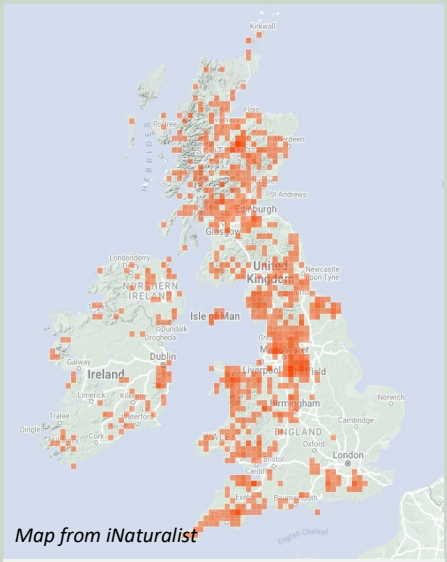
Grows in woods, heaths and bogs mainly in upland area, north side of Britan. Mainly NVC W2-7, W9-11 and W16-18 (**Averis, 2013)**

Bilberry *Vaccinium myrtillus*



Common

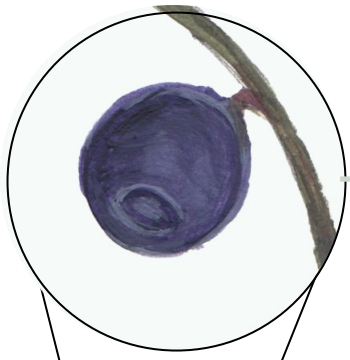
Bilberry Distribution



Map from iNaturalist

Common and found across the UK apart from the East midlands, Norfolk and parts of the South-East.

Worldwide is found across Europe, parts of Russia and USA.



Fruit

Dark edible blueberries appear in autumn.

Autumn Leaves

Leaves are deciduous and turn orange –red in autumn.



Lantern Shaped Flowers

Flowers are pale pink-green and appear in spring/summer.



Description

Bilberry is a common, dwarf shrub of acid soils. It has woody ridged stems and oval, toothed, pointed leaves. The angled stems have tiny green flowers that have a pink-red blush in April-June. These flowers turn into dark bluish-black edible berries in autumn from July-August **(Dorling Kindersley Limited, 2009)**.

The berries are rich in vitamin C and D and have a long history of being used in medicines. The Bilberry's close American relative , the Blueberry is now known to have similar good heath benefits such as reducing risk of cancer and cardiovascular disease **(Raven, 2011).**

Similar Species

Cowberry *Vaccinium vitis-idaea* which grows in similar habitat but has untoothed oblong leaves, white-pink flowers and red berries, which have a bitten taste.

Other Identification Features



Habitat

Bilberry is found on dry to moist acid soils in a variety of habitats and is a major component of upland heaths, some lowland heaths and a range of similar habitats **(Wakely, No date).** This includes NVC H8 & 12 (heaths), NVC W16-18 (woodland), NVC M17-20 (bogs), NVC U2, 4 and 7 (grassland) and NVC U16 (cliff ledges) **(Averis, 2013).**

Examples of Habitat where Bilberry is found



Gelt Wood, Cumbria (Mixed Woodland)

Plant Communities

Bilberry is found in many plant communities that show what grows with Bilberry.

NVC H12 **Bilberry** *Vaccinium myrtillus* can often be seen growing with **Heather (Ling)** *Calluna vulgaris*

NVC H18 **Bilberry** *Vaccinium myrtillus can often be seen with* **Wavy-hair Grass** *Deschampsia flexuosa*

As well as forming its own communities, Bilberry is also a part of ground layers in other communities such as NVC community W17 (**Sessile Oak** *Quercus petraea* - **Downy Birch** *Betula pubescens* - **Greater Fork-Moss** *Dicranum majus woodland)* **(Wikipedia, 2021).**

Upland Heath





Wedholme Flow, Cumbria (Bog, Heath, Woodland)



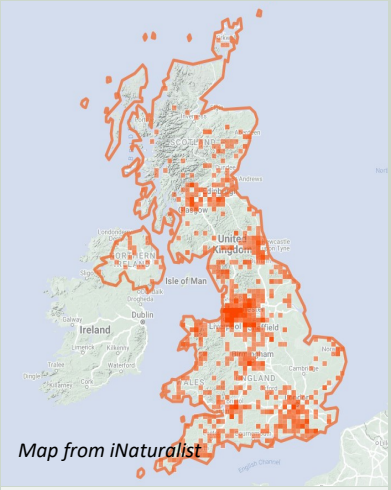
Bilberry Heath as a ground layer within NVC W17

Broad Buckler Fern *Dryopteris dilatata*



Common and Widespread

Broad Buckler Fern Distribution



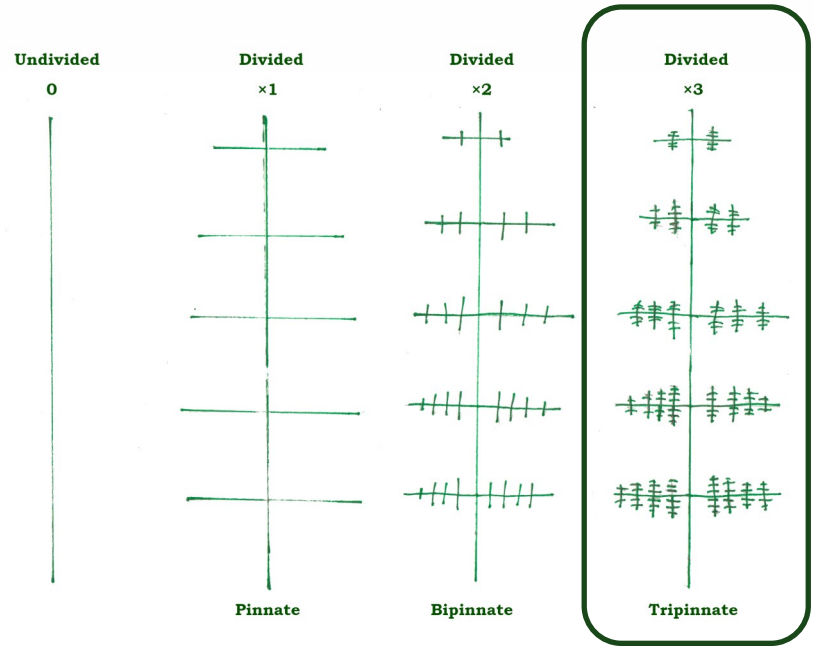
Common and found throughout Britain.

Worldwide Mainly found in Europe.

Frond Structure

3ˣdivided= **Tripinnate**

(Merryweather, 1992).



Leaf edge

Leaf edge is pointed and the outline is cured (Convex) **(Merryweather, 2020).**



Frond Shape

The fronds are distinctly triangular in shape **(Merryweather, 1992)**.



Description

Broad Buckler fern is a deciduous fern that has a dense single crown with erect “shuttlecock” forming fronds up to 150cm long (Diagram C below) **(British Pteridological Society, 2012)** with a tripinnate frond structure.

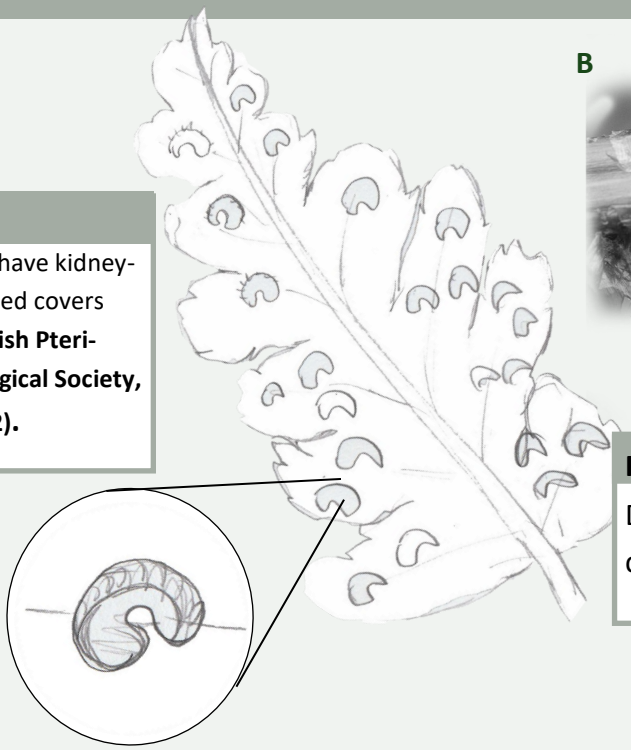
Key characteristics/ identification features of this fern are its scales which are found on the main stem (Diagram B) which have a dark stripe running down the centre.

Similar Species

Northern Buckler-fern *Dryopteris expansa* which has pale and plain fern scales (may have a narrow stripe on older plants) and has noticeably longer fronds than the frond adjacent. This is unlike Broad Buckler Fern whose fronds are a bit longer or the same length **(Merryweather, 2020).** The Northern Buckler Fern is also mostly found in the mountains, rather than the Broad Buckler Fern which is mostly found in wet woodland.

Key Identification Features

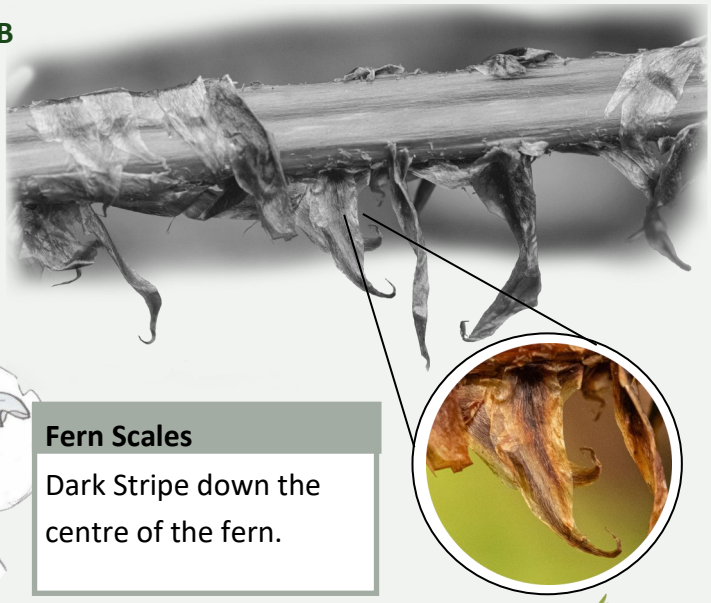
A



Sori

Sori have kidney-shaped covers **(British Pteri-dological Society, 2012).**

B

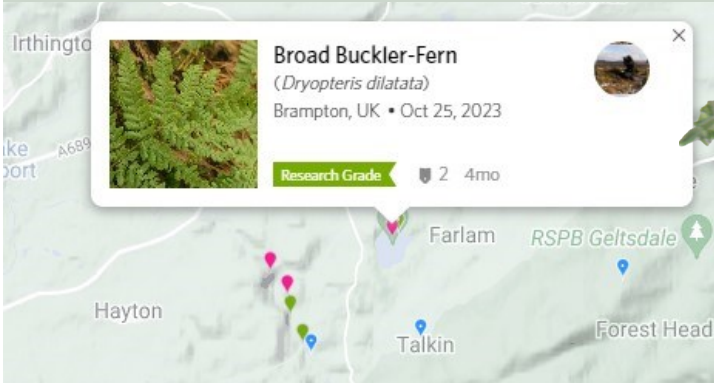


Fern Scales

Dark Stripe down the centre of the fern.

Locations Recorded

Recorded at Talkin Tarn, Miltonrigg Wood and Drumburgh Moss.





Frond Structure

Habitat

The Broad Buckler Fern is a native, common and widespread fern in Europe. In the UK it grows mainly in moist acid, peaty soils in woodlands (NVC W9-11 and 16-17) but can grow on a wide range of other habitats such as on river banks, pockets of leaf litter, heaths, bogs, sand dunes and on cliffs **(Averis, 2013).** In other parts of southern Europe it can be found in the mountains **(iNaturalistUK, No date)**.

Examples of the Habitat Broad Buckler Fern is Found



Miltonrigg Wood, Cumbria—A wet mixed woodland of mainly oaks and birches with many fern, moss and lichen communities. Also has patches of Wood-sorrel *Oxalis acetosella* growing in the mosses **(NVC WII)**

Plant Communities

Broad Buckler Fern can be present as ground flora in other communities such as in wet woodland,

NVC W4 (**Downy Birch** *Betula pubescans* and **Purple Moor Grass** *Molinia caerulea*)**(Duram County Council, 2024).**



Welhomle Flow, Cumbria— Canopy is mainly dominated by Downy Birch *Betula pubescens* with some Sessile Oak *Quercus petraea.* While ground flora includes Broad Buckler Fern *Dryopteris dilatata*, Foxgloves *Digitalis purpurea,* Bracken *Pteridium aquilinum* and grass communities.



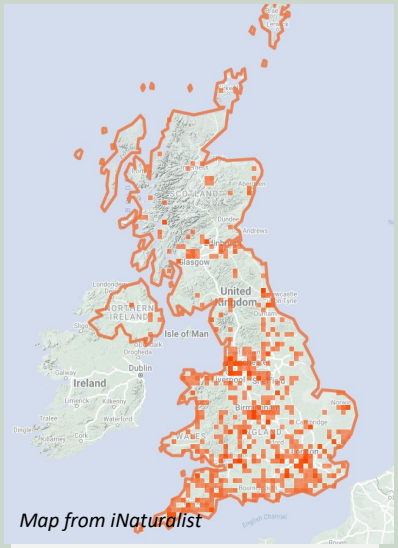
Welhomle Flow, Cumbria– Broad Buckler Fern growing on the edge of a river bank.

Twenty-plume Moth *Alucita hexadactyla*



Common

Twenty-plume Moth Distribution



Map from iNaturalist

Common and found throughout Britain.

Worldwide is found through Europe.

Wings Closed



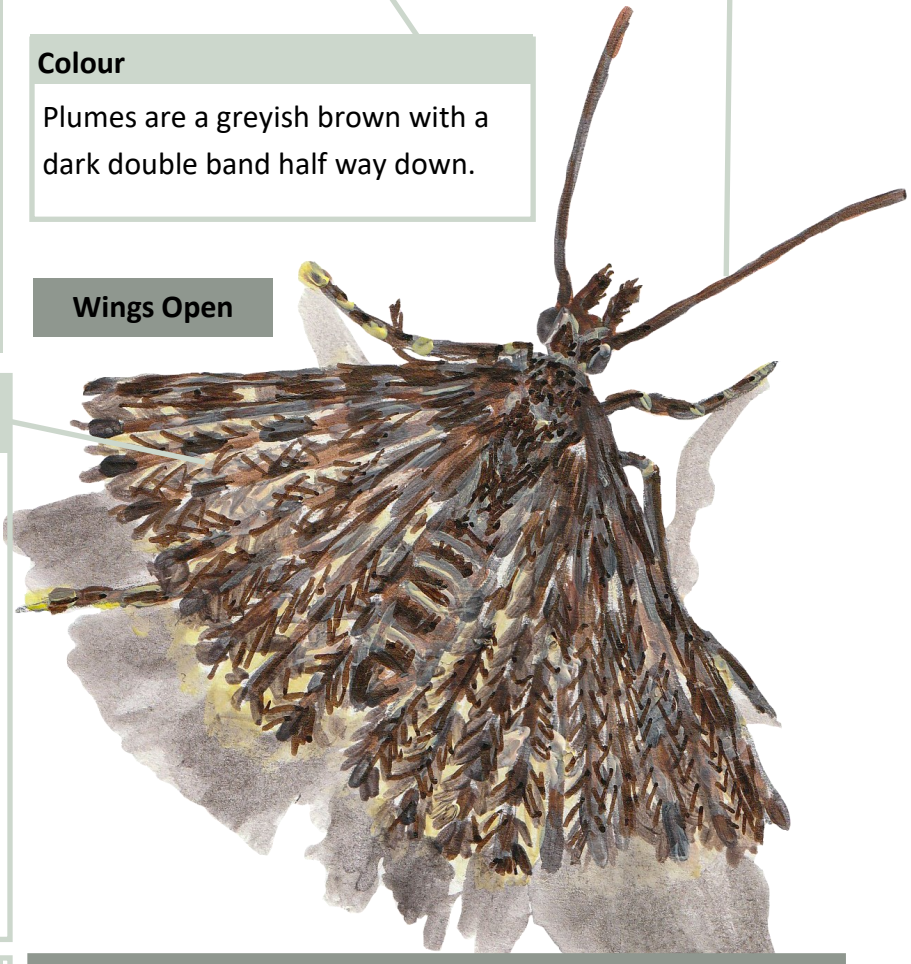
Thread-like Antennae

The antennae are straight and thread-like **(Sterling, Parsons, Lewington, 2012).**

Colour

Plumes are a greyish brown with a dark double band half way down.

Wings Open



Six Plumes

Unlike its English name the Twenty-plume Moth has six feathery plumes on each of its forewings and hindwings, so Twenty Four-plume Moth might be a more fitting name.

The scientific name is more accurate, meaning six-fingered **(Kimber, 2024).**

Resting Position

At rest wings may be open or closed so the plumes are not obvious **(Sterling, Parsons, Lewington, 2012) .**

Key Facts



Wingspan Range 14-16mm

Larva Foodplant Honeysuckle

Time of flight Night time

Description

The Twenty-plume Moth is common throughout Britain and is the only species of its family (Alucitidae) in Britain **(Butterfly Conservation, No Date).** It is a part of the micro moth group because of its small size, wingspan is around 14-16mm across. It's wings are made up of six feathery plumes on each wing and are a greyish-brown colour with a dark double band going across halfway **(Kimber, 2024).**

The Twenty-plume Moth is found as a adult at any time of year **(Kimber, 2024)**. The larva foodplant is Honeysuckle (shown below), which the larva feeds on. The larva feed on the flowers buds (diagram A) and sometimes its leaves. The Twenty-plume Moth is single-brooded and can be recorded in every month of the year **(Sterling, Parsons, Lewington, 2012).** Best time to see adult in flight is at night which are attracted to lights.

Larva and Foodplant

Honeysuckle *Lonicera periclymenum* is a woody stemmed climber with opposite paired leaves and creamy-pink flowers. It grows in most soils mainly in woods (NVC W10-11) (**Averis, 2013).**

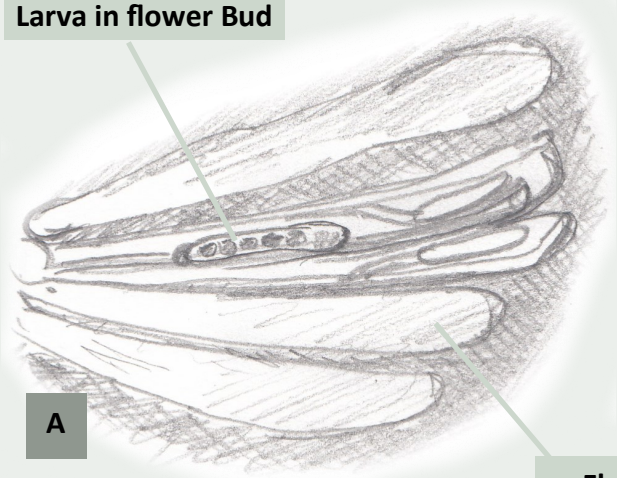




Foodplant– Honeysuckle

Honeysuckle growing up tree in Miltonrigg Wood.

Larva in flower Bud



A

Flower buds

(Werkgroep Bladmineerders, 2024)

Habitat

The Twenty-plume Moth is found in woodlands, hedgerows and gardens or anywhere their larva food plant is found. Its primary habitat is in well-vegetated woods where its food plant can grow up trees, rocks and walls.

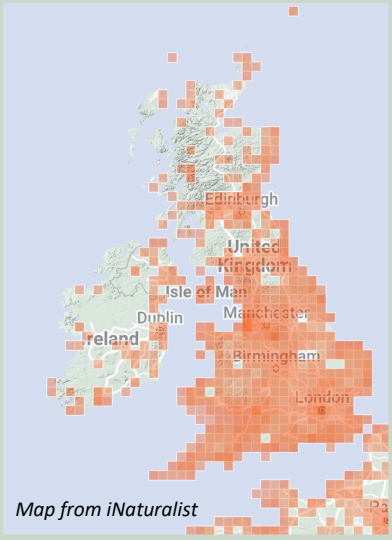
Painted Lady *Vanessa cardui*



Locally Common

Regular Immigrant

Painted Lady Distribution



Found throughout Britain.

Worldwide is found across Europe, North America, Africa and parts of Asia.

Underside

Pattern

Has a marbled buffish brown pattern.

Eye Spots

Has five marginal eye-spots along underside edge.



Inside margin

Brown-orange inside margin which fades as butterfly ages.

Upper-side

Wing Tips

Wing tips are black with white spots.

Upperside Pattern

Has a black upper-side pattern.



Background Colour

Has a salmon-pink flushed orange background colour. This pink fades in time to light orange.

What's in the Name?

According to Peter Marren the original name for the Painted Lady may have been Bella Donna. This name comes from the ladies who painted their faces in rouge kohl and white lead to look fashionable. The name Bella Donna may have come from France and Spain ,bella dama o cardero, 'the pretty lady of the thistles' which then turned into the Painted Lady we know today **(Marren, 2019).**

Description

The Painted Lady is medium sized butterfly with a wingspan of 6cm. Its underside has a marbled buffish brown– white pattern with five marginal eyespots on its edge. The Upper-side has a orange to salmon pink background colour when it is freshly emerged , which fades with age. This is covered with a black stripped pattern with spots on the bottom of its hindwing. The wing tips of its forewing are black with white spots.

The Painted Lady is a migratory species of butterfly, which appears in Britain from southern Europe and North Africa as early as January or February in some years. The main swarms arrive in May–June **(Thomas, Lewington, 1991). "**It has a strong , purposeful flight and will spend most of its time basking on bare ground" **(Lewington, 2003).**

Larva and Foodplant

In a typical year the Painted Lady has three generations across Europe making one of the world's most successful butterflies **(Thomas, Lewington, 1991).** In Britain the Painted Lady can't survive our cold, wet winters, so only breeds up until October/ November **(Lewington, 2003).**



Larva Foodplant

Larval Foodplant is various species of thistles where eggs are laid singly. Other foodplants are also occasionally used such as Mallow (**Lewington, 2003).**

Larva

The larva are found on the underside of leaves in silk web-like tents where it eats away at the cuticle, leaving a transparent window (**Eeles, 2019).**

Habitat

The Painted Lady likes warm, well-drained habitats but can be found in just about any open area ranging from town gardens to the highest mountains and is a species that can breed on intensive farmland **(Eeles, 2019).** Its primary habitat is on dry, open heaths, dunes and downland where it can feed on many flowers and bask on warm patches of bare ground, sand or rock **(Thomas, Lewington, 1991).**

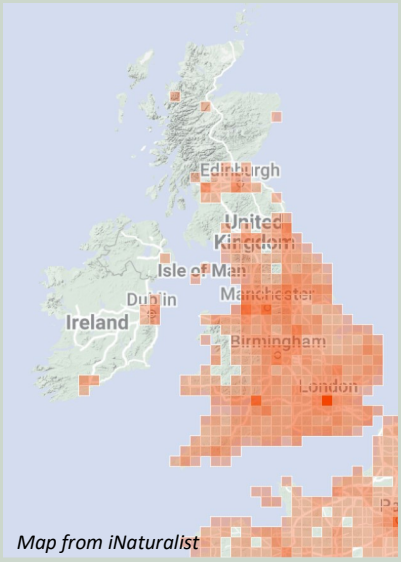
Harlequin Ladybird *Harmonia axyridis*



Common

Invasive Non-native Species

Harlequin Ladybird Distribution

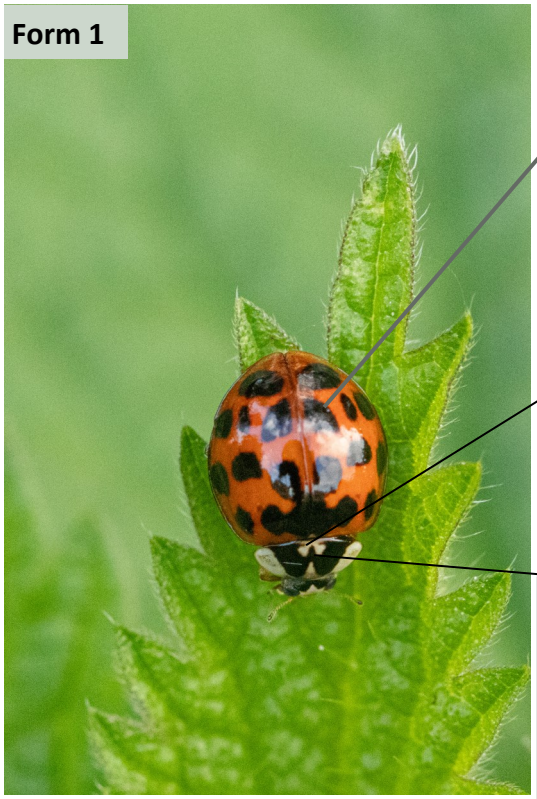


Map from iNaturalist

Commonest Ladybird species in Britain.

Worldwide is found across Europe, North and South America and parts of Africa and Asia.

Form 1



Spots

Typical form has 16 black spots but can range from 1-21

(Brock, 2014)



White Head Shape

Has a white triangular mark on its head.

4

Adult

Many versions

Has many different versions, varying from red, orange, yellow and black forms.

Form 2



5-8mm

Head

Head is black with two white spots ether side.

Shiny wing Case

Wing Case is smooth and shiny with varies spots on.

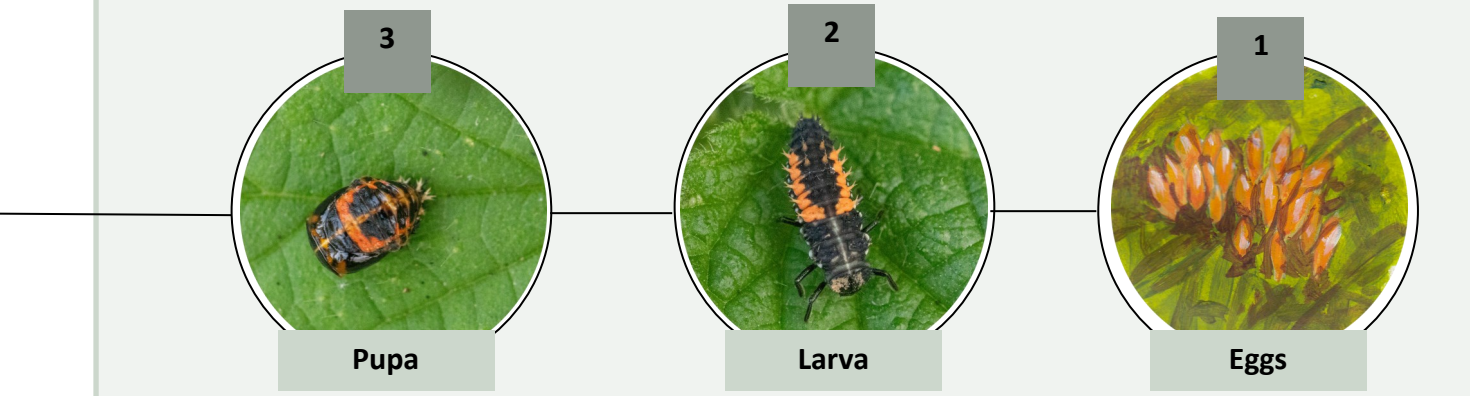
Description

The Harlequin Ladybird is a invasive non-native species that has come from Japan **(Chinery, 2012).** It has spread across Europe and was first introduced to Britain in 2004. Since then it has spread across many urban and suburban areas (**Brock, 2014).** The Harlequin varied and has many forms which range from Red, orange, yellow and black.

Key identification features are its triangular white mark on is head and a red border found on the under-side of its abdomen **(Chinery, 2012).** The Harlequin Ladybird is also bigger than most of our native species. The Harlequin feeds on aphids and other soft bodied insects including its own kind. It is believed it has caused a decline in some native species of ladybird **(Brock, 2021).**

Ladybirds are mainly seen April to September.

Stages



Pupa	Larva	Eggs
*Dark base colour * Orange inner border * Hairs at base	* Dark-coloured body * Orange spines down ether side of its abdomen * Four other smaller orange spines in a block of four at end of abdomen	* Orange-yellow Coloured eggs * Found in clusters

Habitat

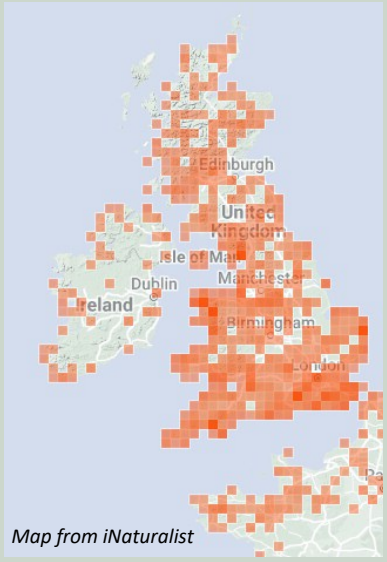
The Harlequin Ladybird is mainly found in woodland, gardens, parks and scrub. I have found they particularly like Stinging Nettles *Urtica dioica* and Elder *Sambucus nigra* as these plants seem to attract lots of aphids which are food for their larva and the adults themselves.

Common Lizard *Zootaca vivipara*



Common

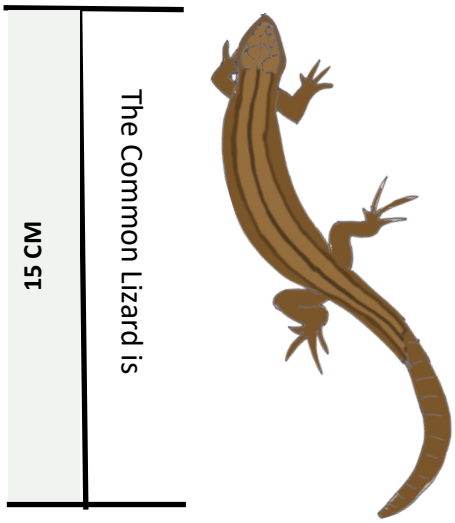
Common Lizard Distribution



Map from iNaturalist

Common and widespread across Britain.

Worldwide is widespread across Europe and Asia.



Size

13– 15cm

Females are normally bigger than males.

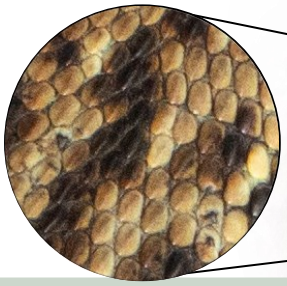
Toes have Sharp Claws

The Common Lizard has sharp claws at the end of its toes .



Darker Flanks

Females have darker flanks and darker vertebral line.



Scales

Skin is covered in scales and is typically brown with flecks and lines. Sometimes is a dull green but never a bright green **(Inns , 2009)**.

Vertebral line

Female

Description

The Common Lizard is a 13 –15cm lizard which is common and widespread across the UK **(The Wildlife Trusts, No date).** Typically they have a brown overall appearance with rows of light brown lines, darker brown flanks and pointed head. They can vary in colour going from grey, ginger to a dull green **(Inns, 2009).** There is also a melanistic black version and an all green version but these aren't as bright and don't have the brown markings with cream eye spot centres of the male Sand Lizard *Lacerta agilis*.

Females tend to have a paler back with darker contrasting flanks and vertebral line. Females also have a paler yellow underside and are noticeably fatter than the male. Males tend to be slimmer and are patterned with fine black lines with white flecks and have an bright yellow or orange underside **(Inns, 2009)**.

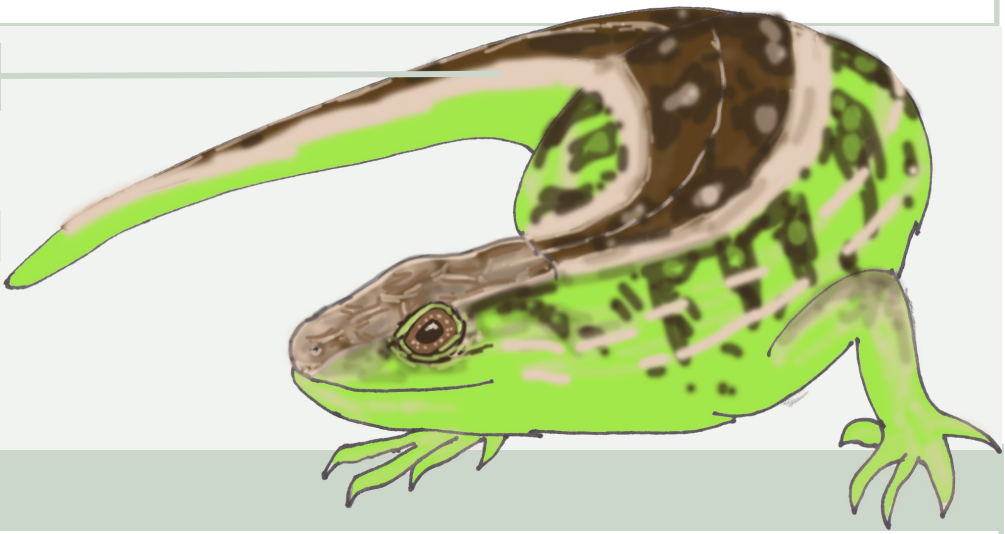
Similar Species

Sand Lizard *Lacerta agilis w*hich mainly live on sand dunes and are a rarer lizard. Main key differences are the Sand Lizard's back stripe which has cream eyes and the males bright green patterned flanks with the Common Lizard doesn't have.

Sand Lizard *Lacerta agilis*

Cream Eyes on Back Stripe

Bright Green Flanks (Male)



Habitat

The Common Lizard lives in a variety of habitats which include heathlands, commons, sea cliffs, sand dunes, railway and roadside embankments, chalk downland, open woodland, moors and bogs **(Inns, 2009).** Its primary habitat would be open and undisturbed and has good sun exposure for basking in, notably heathland and moors. These would be ideal as they would provide the lizard with sunny basking spots and an abundance of invertebrate food **(Sterry, 2005).**

Wedholme Flow _ Heathland, Bog

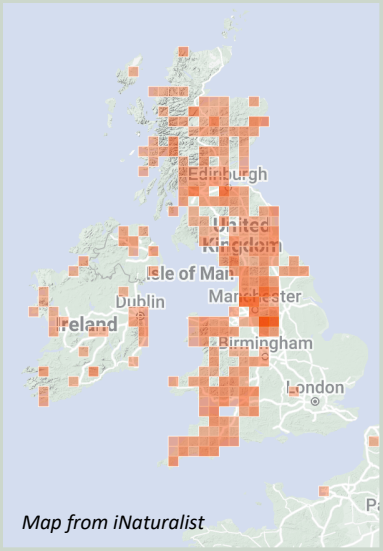


White-throated Dipper *Cinclus cinclus*



Scarce and Local Resident

White-throated Dipper Distribution



Map from iNaturalist

Local resident next to rivers, accept for south-east lowlands.

Worldwide is found in Europe and Asia.

In Flight

Low and quick, jerky flight and always over water.



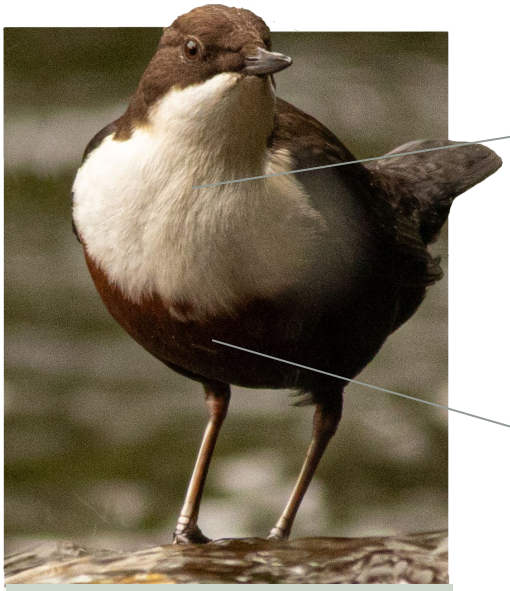


Diagram 1 –*Front View*

White Chest

As its names suggests, the White-throated Dipper has a white chest patch

Colour Band

Rusty Brown colour band under chest.

Head

Has a chocolate brown head.

Tail

Has a short wedge shaped tail.



Beak

Has a sharp and pointed beak.

Round Body Shape

Has a round dumpy body shape.

Diagram 2—*Side View*

Description

The White-throated Dipper is a small brown chocolate coloured bird with a white chest and rusty brown under band. It has a round dumpy body shape, short wedge-shaped tail and sharp pointed beak. The Dipper is a freshwater bird that characteristically bobs when next to water.

This bobbing is were its scientific name arrives from. The Ancient Greeks described small birds near water that wagged their tails “kinklos” which is were their Genus come from, Cinclus **(Wikipedia, 2024).**

Dippers also have membranous eye lids which can be seen when blinking **(Hume, Still, Swash, Harrop, Tipling, 2016).** These act as swimming goggles for the bird, allowing the bird to see underwater.

The Dipper feeds on invertebrate larva of dragonflies, damselflies and various beetles and flies. Aswell as small fish, fish eggs, molluscs and crustaceans at which it dives underwater, scrambling amongst rocks and debris, while flapping its wings **(Wikipedia,2024).**

Similar Species

In the UK there is no similar species like it but there are other dipper species worldwide.

Habitat

The Dipper is a bird that lives next to fast flowing stony streams and rivers. “These habitats are challenging environments as they are in areas with high rainfall in upland habitat on steep slopes . Here the water tumbles down the hillsides in a series of rivers, streams and waterfalls” **(Lake, Liley, Still, Swash, 2015)**. The Dipper happily bobs next to the waterside on boulders and stones regardless of the waterflow.

Habitat Example



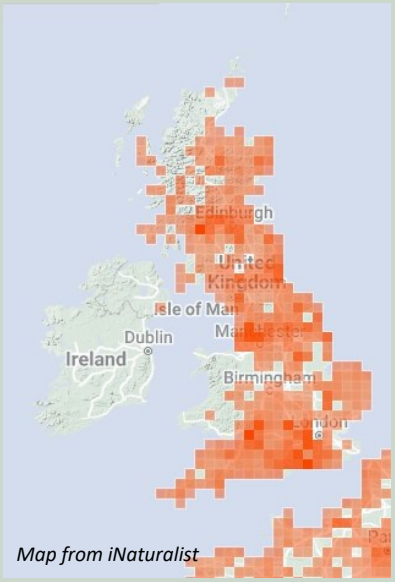
River Gelt, Cumbria

Western Roe Deer *Capreolus capreolus*



Common

Western Roe Deer Distribution



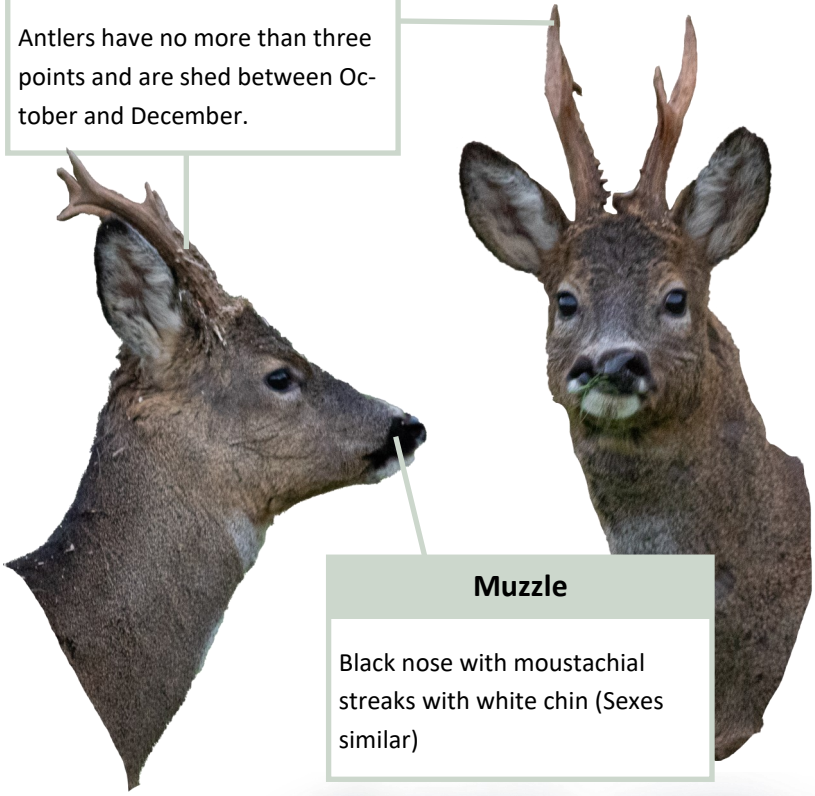
Common and widespread. Found throughout Britain.

Worldwide found throughout Europe.

Male (Buck)

Antlers (males Only)

Antlers have no more than three points and are shed between October and December.



Muzzle

Black nose with moustachial streaks with white chin (Sexes similar)

Rump

Rump is white or buff coloured . The female in winter has a tuft of white hairs that looks like a tail.

Ears

Ears are pointed with black outline.

Male (Buck)

Female (Doe)

Description

The Western Roe Deer is a native to Britain and is one of the most common and widespread. It is an elegant medium-sized deer with a large white to buff rump patch with no tail and a plain reddish-brown coat without any spots in the summer **(Couzens, Swash, Still, Dunn, 2017)** . In winter their coat moults into a much duller thick and dense slate greyish brown colour and females (Does) grow an white anal hair tuft that looks similar to a tail (known as a tush) **(The British Deer Society, 2024).**

Only the males (bucks) grow antlers which have no more than three points and have a bearded, heavily texted surface with lots of nodules **(The British Deer Society, 2024).** The antlers grow in winter/ early spring and loose their velvet in April– May **(Sterry, 2005).** The antlers are then shed in early winter after the rut which is normally around July-August **(King, 2016)**

Both sexes have the characteristic black nose with moustachial streaks with a white chin. Western Roe Deer also have big eyes and large ears as these are the deer's primary senses. These deer like all deer are generally very nervous by signs of danger, such as human presents. This is due to the fact that they are hunted by many animals including humans.

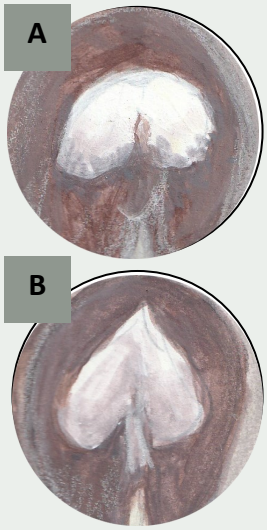
Other Identification Features and Tracks

Rump differences in the sexes

Male: Kidney-shaped (Diagram A)

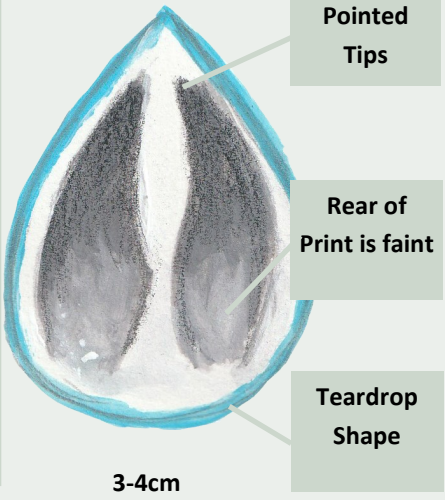
Female: Heart-shaped (Diagram B)

Both have no obvious tail.



Tracks

Western Roe Deer tracks are a narrow teardrop shape with double lines made by the toes of the cloven hoof **(King, 2016).**



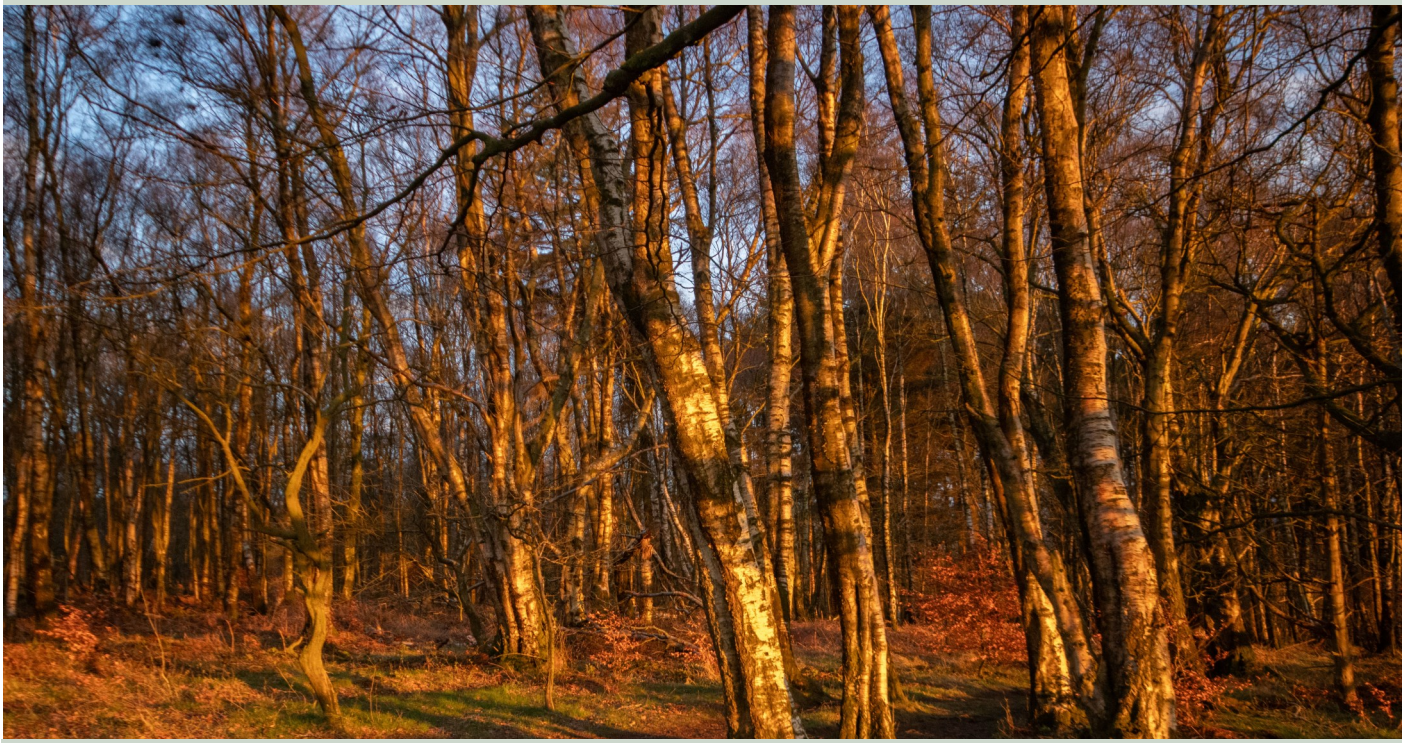
▼ **Males (Bucks)** preparing for the rutting season from July– August



Habitat

The Western Roe Deer like a combination of woodland, moorland and fields, preferring deciduous wood with wide clearing **(Couzens, Swash, Still, Dunn, 2017)**. Western Roe Deer are crepuscular or nocturnal and can be seen in fields feeding adjacent to this woodland. When alarmed they will retreat back to the safety of the woodland.

Examples of Habitat



Miltonrigg Wood, Cumbria– deciduous woodland mainly with Birches, Oaks, Rowan and some larches. Ground flora includes Bluebells, Wood Sorrel, Bracken.



Drumburgh Moss, Cumbria– Heathland/ Raised Bog with mainly heather, grasses, sedges, as well as larger plants such as Willows and Downy Birch.



Watchtree Nature Reserve, Cumbria– Open fields and farmland.



Wedhomle Flow, Cumbria– Birch woodland next to farmland.

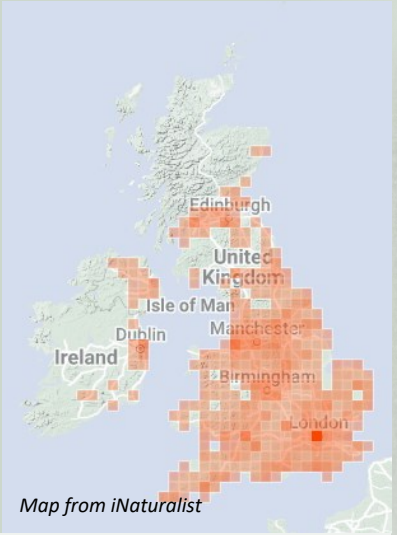
Grey Squirrel *Sciurus carolinensis*



Common

Introduced Non Native Species

Grey Squirrel Distribution



Map from iNaturalist

Common across England, parts of Scotland and Ireland.

Worldwide found in North America and parts of Europe.



Found near Trees

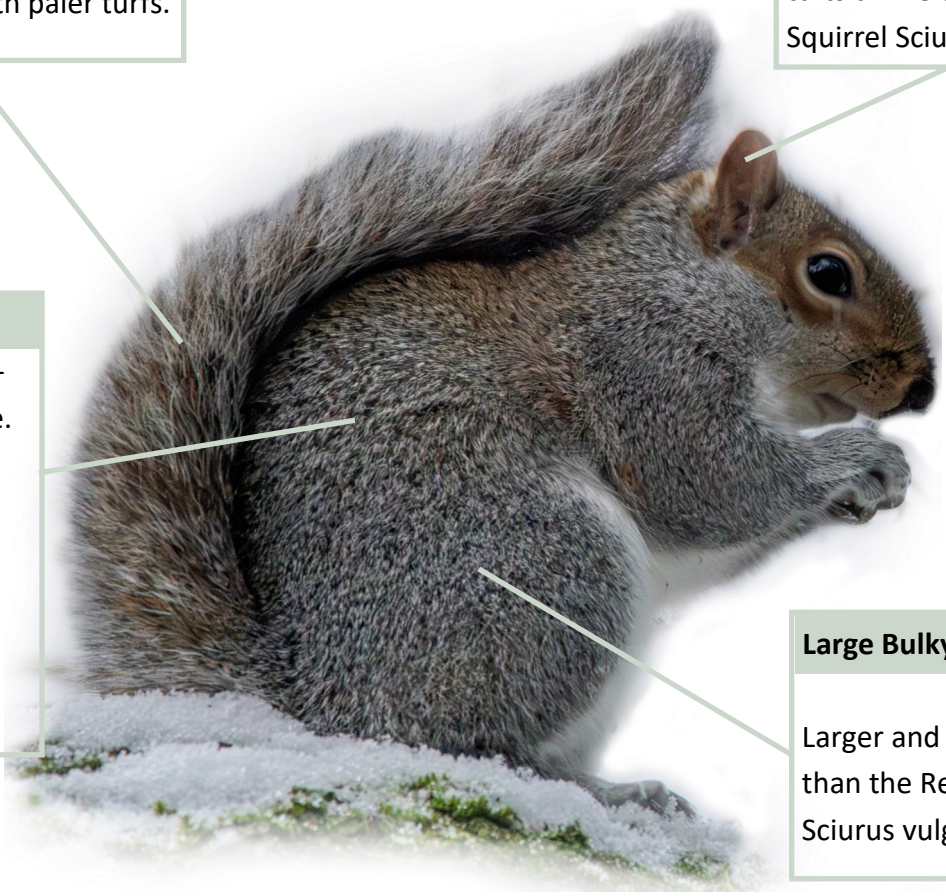
Is found on or near trees.

Long Bushy Tail

Long grey tail with paler turfs.

Rounded Ears

Rounded ears with no ear tufts unlike the Red Squirrel Sciurus vulgaris.



Grey Fur

Has grey fur peppered with white. In summer has patchy reddish brown tinge on back, flanks and legs.

Large Bulky Body

Larger and bulkier body than the Red Squirrel Sciurus vulgaris.

Description

The Grey Squirrel is a medium-sized squirrel measuring 23-30cm (not including tail). They have a grey coat which is peppered with white, whitish chest and belly with a long bushy tail. In summer its coat has patches of a reddish-ginger to brown tinge on its back and legs **(Couzens et al, 2017).** They have rounded ears with no ear tufts, unlike the Red Squirrel *Sciurus vulgaris*. The Grey Squirrel is also heavier and has a much more bulky body compared to the Red Squirrel. The tail has a lighter brown under colour which has an outer edge of white and grey.

The is also a black colour form which have become commoner in areas such as Bedfordshire, Cambridge-shire and Hertfordshire **(Couzens et al, 2017).**

Similar Species



Red Squirrel *Scurus vulgaris* is our native squirrel of Britain. The Red is a much smaller, slender and lighter squirrel, able to reach the ends of branches the heavier Grey Squirrel can't. Other key differences would be the presents of ear tufts, which it has over winter which Greys lack. The Grey Squirrel has reddish-brown patches, this is always patchy and never uniform like the Red **(Couzens et al, 2017).**



Edible Dormouse *Glis glis* can be mistaken for a Grey squirrel but are much smaller, plumper and have softer looking fur. The fur is grey and has no white fringe obvious on a Grey Squirrel **(Couzens et al, 2017).** The Edible Dormouse has proportionately larger eyes, rounder ears, and longer toes than a Grey Squirrel **(Sterry, 2005).** The Edible Dormouse also spends its life in the tree tops and doesn't come down to the ground like Grey Squirrels do.



Habitat

The Grey Squirrel is found across all kinds of woodland but are more happy in broadleaved woodland than coniferous. They can also be found in parks and gardens where they can be seen feeding on the ground or in trees.

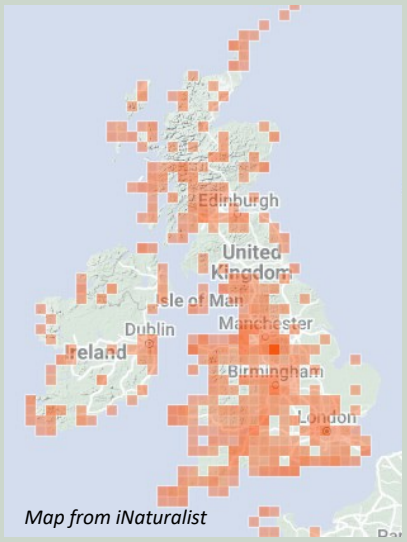
Rickerby Park. Cumbria

Raven *Corvus corax*



Locally Common

Raven Distribution



Found across UK

Worldwide found in North America, Europe and parts of Asia.

Long Tail

Has long broad diamond-shaped tail.

Long Narrow Wing Tips

Has long wings with narrow tips.



Adult in Flight

All Black Scale-like feathers

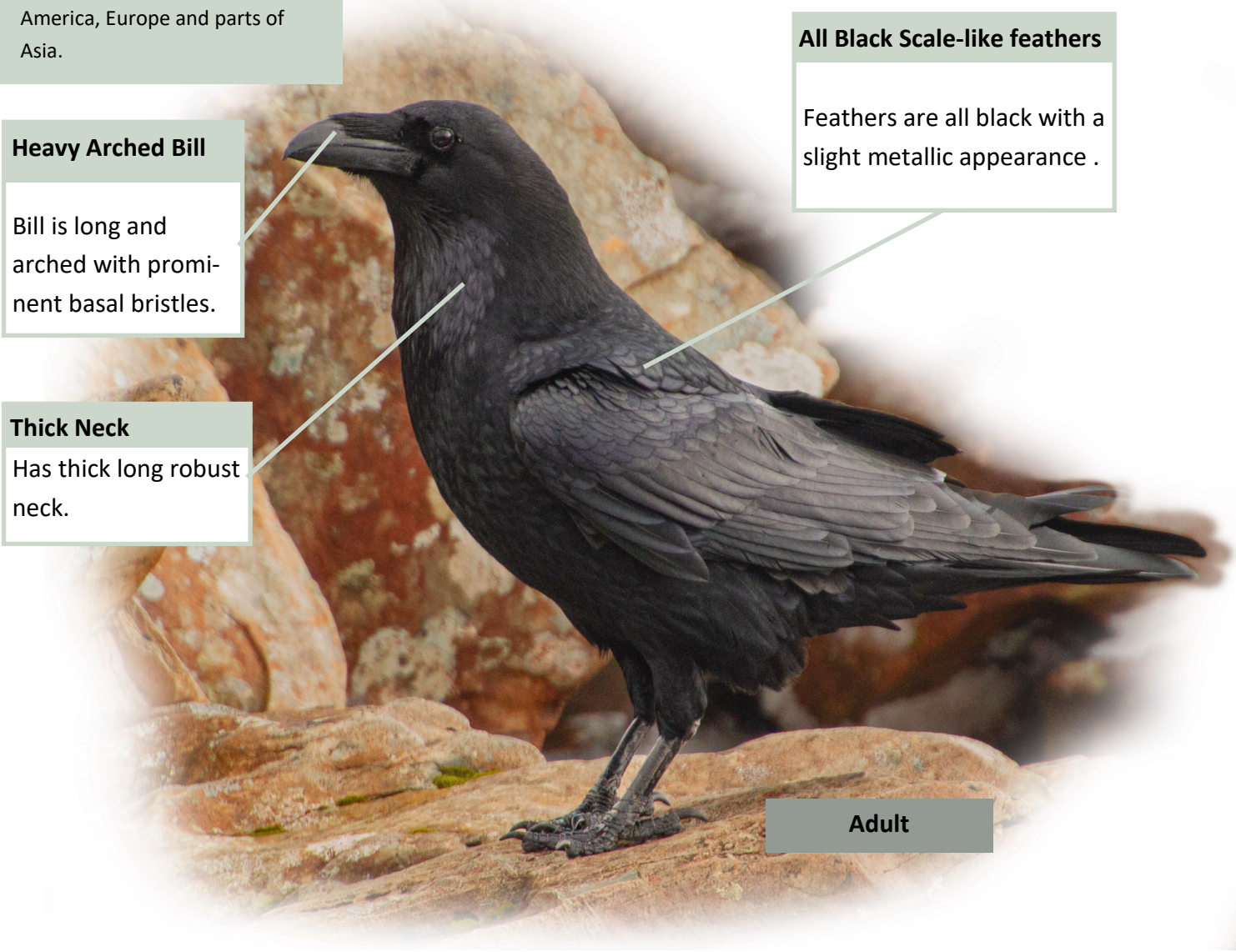
Feathers are all black with a slight metallic appearance .

Heavy Arched Bill

Bill is long and arched with prominent basal bristles.

Thick Neck

Has thick long robust neck.



Adult

Description

The Raven is a large majestic crow about the size of a buzzard. Ravens are all black with a glossy metallic appearance in some areas of its plumage, especially on the throat, back and top of wings. Key features for identification would be its round crown with heavy arched bill, thick robust neck, and long broad diamond-shaped tail **(Hume, Still, Swash, Harrop,Tipling, 2016).**

When in flight Ravens have long wings with narrow fingered tips with smoother, steadier wingbeats compared with faster, choppier wingbeats of the Carrion Crow *Corvus corone* **(Cornell University, 2024)**. "Raven is also a bit of a acrobatic flier, often doing rolls and somersaults in the air with angled wings" **(Cornell University, 2024).**

The Ravens call is a distinctive loud echoing croaking sound.

Similar Species



Carrion Crow *Corvus corone* is similar to the Raven but much smaller. The Carrion Crow has a less heavy, straighter bill with smoother basal bristles and a thinner shorter neck. In flight the wings are broad at the tips and held rather straight compared to Ravens angled wings. The tail is shorter and quite square **(Hume, Still, Swash, Harrop,Tipling, 2016**).

Habitat

Ravens are found around cliffs, woodland edges and on the coast. Its primary habitat in the UK in mountainous or coastal terrain but can be found in wooded areas with expanses of open land nearby (**Wikipedia, 2024)**

Habitat Example



Scarfell Pike, Cumbria

Wildlife Recording

iNaturalist Records



Most Observations
dawn2022 159



Most Species
dawn2022 109

	Common Raven (*Corvus corax*) Research Grade 3	dawn2022	Mar 24, 2024 2:55 PM GMT	Scafell Pike	Today 8:36 PM GMT
	Western Roe Deer (*Capreolus capreolus*) Research Grade 3	dawn2022	Dec 2, 2023 9:52 AM GMT	Cumbria, UK	Dec 3, 2023 7:54 PM GMT
	Eastern Grey Squirrel (*Sciurus carolinensis*) Research Grade 3	dawn2022	Dec 2, 2023 10:48 AM GMT	Cumbria, UK	Dec 3, 2023 7:54 PM GMT
	Twenty-plume Moth (*Alucita hexadactyla*) Research Grade 2	dawn2022	Nov 15, 2023 6:08 PM GMT	Carlisle, UK	Nov 15, 2023 8:25 PM GMT
	Silver Birch (*Betula pendula*) 1	dawn2022	Nov 4, 2023 3:59 PM GMT	Wigton CA7	Nov 7, 2023 10:19 PM GMT
	Bilberry (*Vaccinium myrtillus*) Research Grade 2	dawn2022	Nov 4, 2023 3:00 PM GMT	Wigton CA7	Nov 7, 2023 7:15 PM GMT
	Yellow Stagshorn (*Calocera viscosa*) Research Grade 3	dawn2022	Oct 7, 2023 1:30 PM GMT	Gelt Woods, Brampton CA8	Oct 26, 2023 8:22 PM GMT
	Broad Buckler-Fern (*Dryopteris dilatata*) Research Grade 2	dawn2022	Oct 25, 2023 4:04 PM GMT	Brampton, UK	Oct 25, 2023 9:35 PM GMT
	Common Lizard (*Zootoca vivipara*) Research Grade 4	dawn2022	May 9, 2023 2:56 PM GMT	Wigton CA7	Oct 7, 2023 11:26 PM GMT
	White-throated Dipper (*Cinclus cinclus*) Research Grade 6	dawn2022	Sep 30, 2023 3:01 PM GMT	Cumbria, UK	Sep 30, 2023 5:10 PM GMT
	Harlequin Ladybird (*Harmonia axyridis*) Research Grade 3	dawn2022	Sep 29, 2023 3:45 PM GMT	Carlisle, UK	Sep 29, 2023 9:09 PM GMT
	Harlequin Ladybird (*Harmonia axyridis*) Research Grade 2	dawn2022	Sep 29, 2023 3:43 PM GMT	Carlisle, UK	Sep 29, 2023 9:09 PM GMT
	Harlequin Ladybird (*Harmonia axyridis*) Research Grade 2	dawn2022	Sep 29, 2023 3:37 PM GMT	Carlisle, UK	Sep 29, 2023 9:09 PM GMT
	Painted Lady (*Vanessa cardui*) Research Grade 2	dawn2022	Sep 27, 2023 3:41 PM GMT	Carlisle, UK	Sep 29, 2023 1:32 PM GMT

References

A) Fungi (Yellow Staghorn)

First Nature (1995-2024) *Calocera viscosa*

Available at: https://www.first-nature.com/fungi/calocera-viscosa.php

Visited on 21st December 2023

Phillips (2006) *Mushrooms*, P350—351

Sharp (2021) *August Fungi Focus: Yellow Staghorn (Calocera viscosa).*

Available at: https://www.woodlands.co.uk/blog/woodland-activities/august-fungi-focus-yellow-stagshorn-calocera-viscosa/

Visited on 21st December 2023

WildFoodUK (No date) *Yellow Staghorn*

Available at: https://www.wildfooduk.com/mushroom-guide/yellow-stagshorn/#:~:text=2%E2%80%939%20cm%20tall%2C%202,or%20tacky%2C%20especially%20after%20rains.

Visited on 21st December 2023

B) Plant 1 (Silver Birch)

Averis, B (2013) *Plants and Habitats: an introduction to common plants and their habitats in Britain and Ireland*, 2015 Edition Swallowtail Print Ltd. *Page 23*

Royal Botanic Gardens Kew (No date) *Betula pendula Silver birch*

Available at: https://www.kew.org/plants/silver-birch

Visited on 4th January 2024

Woodland Trust (No date) *Birch, Silver (Betula pendula)*

Available at: https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/british-trees/a-z-of-british-trees/silver-birch/

Visited on 4th January 2024

Rose, O'Reilly (1981) The Wild Flower Key, 2006 Revised Edition Penguin Group. Page 128

B) Plant 2 (Bilberry)

Averis, B (2013) *Plants and Habitats*: an introduction to common plants and their habitats in Britain and Ireland ,2015 Edition Swallowtail Print Ltd. Page 62

Dorling Kindersley Limited (2009) *Pocket Nature Wildlife of Britain*, Page 122

Raven, S (2011) *Wild Flowers*, 2019 Edition, Bloomsbury Publishing Plc, Page 349

Wakely (No Date) *Bilberry* Vaccinium myrtillus, Natural England,

Available at: https://publications.naturalengland.org.uk/file/5513510929039360

Visited on 13th April 2024

Wikipedia (2021) British NVC community W17

Available at: https://en.wikipedia.org/wiki/British_NVC_community_W17

Visited on 13th April 2024

B) Plant 3 (Broad Buckler-fern)

Averis, B (2013) *Plants and Habitats: an introduction to common plants and their habitats in Britain and Ireland*, 2015 Edition Swallowtail Print Ltd. *Page 159*

British Pteridological Society (2012) *What's that fern?*

Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ebps.org.uk/wp-content/uploads/2014/05/Fern-Guide01.pdf Page 10

Visited on 23rd January 2024

Duram County Council (2024) *Birch Woodland – W4*

Available at: https://durhamlandscape.info/durham-landscape/birch-woodland/

Visited on 14th April 2024

iNaturalistUK (No date) *Broad Buckler-Fern (Dryopteris dilatate)*

Available at: https://uk.inaturalist.org/taxa/359752-Dryopteris-dilatata

Visited on 16th February 2024

Merryweather (1992) *The Fern Guide: A field guide to the ferns, clubmosses, quillworts and horsetails of the British Isles*, *Third Edition 2007, Field Studies Council.* Page 78-80

Merryweather (2020) WILDGuides Ferns, Clubmosses, Quillworts and Horsetails of Britain and Ireland, Princeton University Press, Page 47 and 250

Nature Spot (No Date) *Broad Buckler-fern - Dryopteris dilatate*

Available at: https://www.naturespot.org.uk/species/broad-buckler-fern Page 10

Visited on 23rd January 2024

C) Invertebrate 1 (Twenty-plume Moth)

Averis, B (2013) *Plants and Habitats: an introduction to common plants and their habitats in Britain and Ireland*, 2015 Edition Swallowtail Print Ltd. *Page 76*

Butterfly Conservation (No Date) *Twenty-plume Moth Alucita hexadactyla,*

Available at: *https://butterfly-conservation.org/moths/twenty-plume-moth*

Visited at 1st April 2024

Kimber (2024) *Twenty-plume Moth Alucita hexadactyla, UKmoths,*

Available at : https://ukmoths.org.uk/species/alucita-hexadactyla/adult/

Visited on 1st April 2024

Sterling, Parsons, Lewington (2012) *Field Guide to the Micro Moths of Great Britain and Ireland, Bloomsbury Publishing Plc. Page 186*

Werkgroep Bladmineerders (2024) *Alucita hexadactyla Linnaeus, 1758*

Available at https://www.bladmineerders.be/nl/node/647

Visited on 1st April 2024

C) Invertebrate 2 (Painted Lady)

Eeles (2019) *Life Cycles of British & Irish Butterflies,* Pisces Publications, Pages 240-245

Lewington (2003) *Pocket Guide to the Butterflies of Great Britain and Ireland*, Second Edition 2015, British Wildlife Publishing, an imprint of Bloomsbury Publishing Plc, Pages 96-97.

Marren (2019) Emperors, Admirals & Chimney Sweepers The Weird And Wonderful Names Of Butterflies And Moths, 2020 Edition, Little Toller Books, Page 96.

Thomas, Lewington (1991) *The Butterflies of Britain & Ireland, 2016 Edition*, Bloomsbury Wildlife Bloomsbury Publishing Plc, Pages 178– 181

C) Invertebrate 3 (Harlequin Ladybird)

Brock (2014) *A Comprehensive Guide to Insects of Britain and Ireland*, Expanded Edition 2019, Pisces Publications, Page178

Brock (2021) *Britain's Insects A Field Guide to the Insects of great Britain and Ireland*, Princeton University Press, Page 309-311

Chinery (2012) *Insects of Britain and Western Europe*, 2012 Edition, Bloomsbury, Page 272-273

D) Reptile (Common Lizard)

Inns (2009) *Britain's Reptiles and Amphibians*, Reprinted 2011, Page 52-56

Sterry (2005) *A Photographic Guide to every Common Species Collins complete Guide to British Animals*, 2010 Edition, HarperCollins Publishers Ltd., Page 160

The Wildlife Trusts (No date) *Common lizard*

Available at: https://www.wildlifetrusts.org/wildlife-explorer/reptiles/common-lizard

Visited on 16th April 2024

E) Bird (White-throated Dipper)

Hume, Still, Swash, Harrop, Tipling (2016) Britain's Birds, Princeton University Press, Pages 367

Lake, Liley, Still, Swash (2015) Britain's *Habitats A Field Guide to the Wildlife Habitats of Great Brotain and Ireland*, Second Edition 2020, Princeton University Press, Page 307– 309

Wikipedia (2024) *Dipper*,

Available at: https://en.wikipedia.org/wiki/Dipper

Visited 16th April 2024

F) Mammal (Western Roe Deer)

Couzens, Swash, Still, Dunn (2017) *Britain's Mammals A field guide to the mammals of Britain and Ireland, Princeton University Press, Pages 229-233.*

Evans, Wetton (No date) *The Mammal Guide*

Sterry (2005) *A Photographic Guide to Every Common Species Collins Complete Guide to British Animals,* HarperCollins Publisher Ltd., Page 144

King (2016) Simon King's Nature Watch How to Track and Observe Wildlife, Quadrille Publishing, Pages 88-95

The British Deer Society (2024) *Identifying Roe Deer Capreolus capreolu ,*

Available: https://bds.org.uk/information-advice/about-deer/deer-species/

Visited 17th April 2024

G) Mammal (Grey Squirrel)

Couzens, Swash, Still, Dunn (2017) *Britain's Mammals A field guide to the mammals of Britain and Ireland*, Princeton University Press, Page 58 and Page 62.

Sterry (2005) A Photographic Guide to Every Common Species Collins Complete Guide to British Animals, HarperCollins Publishers Ltd., Page 68.

G) Bird (Raven)

Cornell University (2024) *Common Raven Corvus corax,*

Available at: https://ebird.org/species/comrav?siteLanguage=en_GB,

Visited on 18th April 2024.

Cornell University (2024) *Common Raven*,

Available at: https://www.allaboutbirds.org/guide/Common_Raven/overview#

Visited on 18th April 2024.

Hume, Still, Swash, Harrop, Tipling (2016) *Britain's Birds*, Princeton University Press, Page 470

Wikipedia (2024) Common Raven,

Available at: https://en.wikipedia.org/wiki/Common_raven,

Visited on 18th April 2024.