



# Wild Ways Well and Butterflies

Today's Wild Ways Well task is to go for a walk in your local greenspace and look for butterflies... Remember to follow the guidelines on Social Distancing, stay 2m apart from other people and only walk in your local area – and remember to wash your hands before and after!

You'll **Be Active** by carefully walking outdoors (observing social distancing) keeping your mind busy and occupying your time with nature related tasks and activities. Butterflies can be found in all sorts of different habitats – and some will only live in specific types of places, by exploring you have a much better chance of spotting some.

We can **Connect** with the outdoors simply by looking out of a window, or by observing the butterflies in our local environment. How do you think it feels to live like a butterfly? Can you imagine the huge migrations some of them undertake? You can also connect by seeking out others who love these little creature, there are many online resources to help.

We can **Keep Learning**, Many people love butterflies and there are hundreds of web pages, videos and pictures devoted them. Seek these out and you'll be amazed at what you find. You can also learn by studying the butterflies in your local area.

Butterflies are vital to the world we live in but we rarely **Take Notice** and look very closely at them. It's amazing how much we miss out in nature when we just walk through without paying attention to what is around us.

We can **Give** by giving ourselves a break from the drama of the current events and focusing on the little things around us that give us pleasure and by sharing these with others, in person or online. We can also help butterflies by planting wildflowers, or by improving habitat for them.





# Wild Ways Well



**BE ACTIVE** – Take part in health walks and practical outdoor activities. Explore your local paths, woods and greenspaces.

Spending time outdoors, amongst nature, makes people feel better about their lives.

**CONNECT** – Meet new people. Connect with the people, the wildlife and the nature that's all around us.



The Wild Ways Well project encourages people suffering from, or at risk of, poor mental health to get outside for some daily exercise.



**GIVE** – Your time to be in nature. Give something back by sharing experiences and undertaking conservation tasks.

Remember to observe Social Distancing, stay 2m apart and only walk in your local area.

**TAKE NOTICE** – Note the changing cycles of life. Use your senses. Listen to birds, smell the flowers, live in the moment.



Whilst out amongst the trees, parks and reserves you have a chance to slow down, relax and take your attention away from current events.

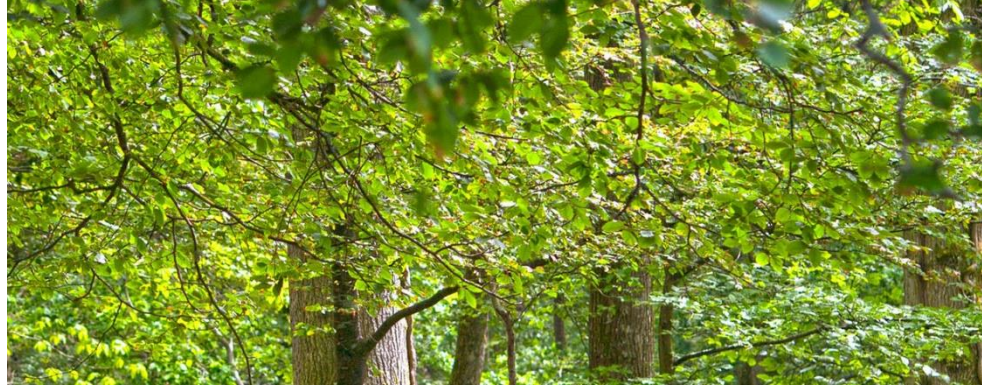


**LEARN** – Identify plants and wildlife, try new crafts, learn new skills. Discover things about nature and about yourself.

This guide will help you to try out some environmental and conservation related activities designed to fit in with the internationally recognised Five Ways to Wellbeing mental health framework.







# What is a butterfly?

Butterflies are flying insects, they evolved from moths – the earliest butterfly fossil dates back about 50 million years. Every butterfly has four wings each of which is covered in scales which are often colourful and patterned. They have six legs, and a segmented body, divided into three parts. The first part is the head and contains mouth parts, including a long coiled tongue which functions like a straw to suck up nectar. Compound eyes and long antennae help them find their way around.

The middle section (called the thorax) holds the wings and legs, and the final section (called the abdomen) contains the reproductive parts.

The butterflies we see flying are at the end of their life cycle, mostly only live as flying insects for a couple of weeks (though some can last a few months, and some can even hibernate over winter). Their life cycle is made of four parts. They begin as an egg, laid on a food plant. From the egg hatches a caterpillar which feeds and grows; some species live as a caterpillar for a few weeks, but some can be much longer - one arctic species can live for 30 years as a caterpillar! Once they are ready they undergo metamorphosis and become a chrysalis (sometimes called a pupa). Whilst in their pupal state (and sometimes encased in a protective cocoon) the caterpillar's cells are broken down and it transforms into the adult butterfly.

The butterfly feeds on nectar from trees and flowers and finds a mate to start the cycle anew.

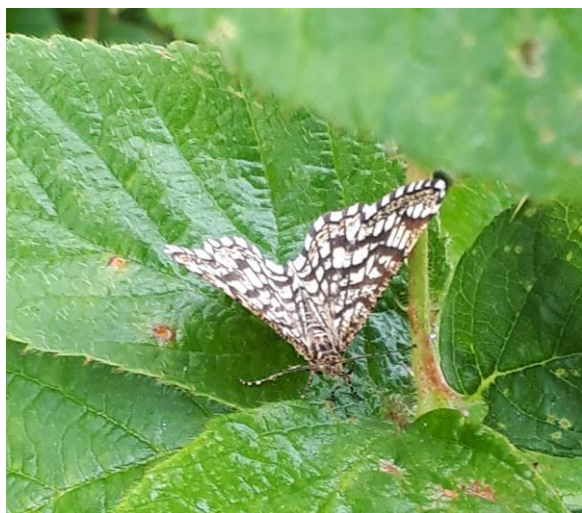
Some butterflies hibernate over winter – others actually migrate. Painted Ladies undertake multi-generational Northward migrations – several generations are born every year and each generation moves a little further North – until they have made it all the way from Africa to Iceland! It used to be thought they went no further but the development of radar revealed that they actually fly back South again, travelling 2500 miles at heights of up to 1000 metres and speeds of up to 30mph. One study, in 2009, showed that 11 Million Painted Ladies arrived in the UK in Spring – and 26 million flew back South in Autumn!





# Is it a moth? Is it a butterfly?

Well, apart from the obvious that we usually see butterflies at day and most moths at night, is there any other way to tell the difference if we aren't too sure?



One easy way to tell the difference is the way they rest:

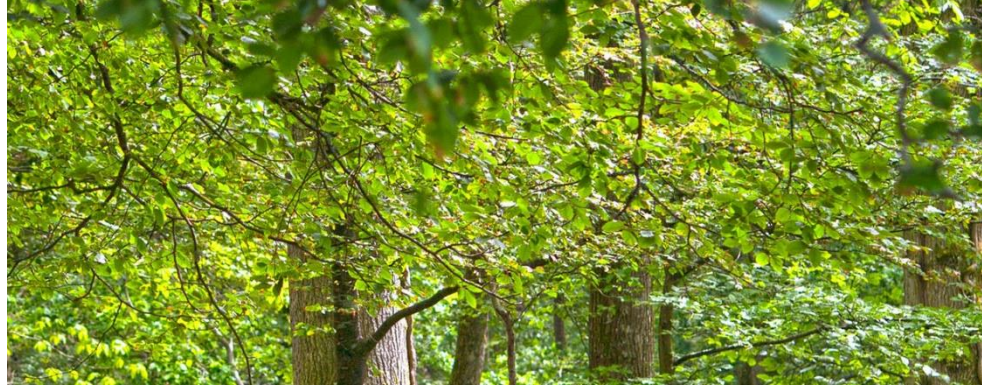
- Butterflies will rest with their wings closed (like the Comma above)
- Moths will rest with their wings open (like the latticed heath to the left)

Another easy way (if you can get close enough) is the antenna:

- Butterfly antenna are very long with very few hairs and clubbed ends
- Moth antenna will be much shorter and a lot furrier







# If You Were A Painted Lady



## June/July

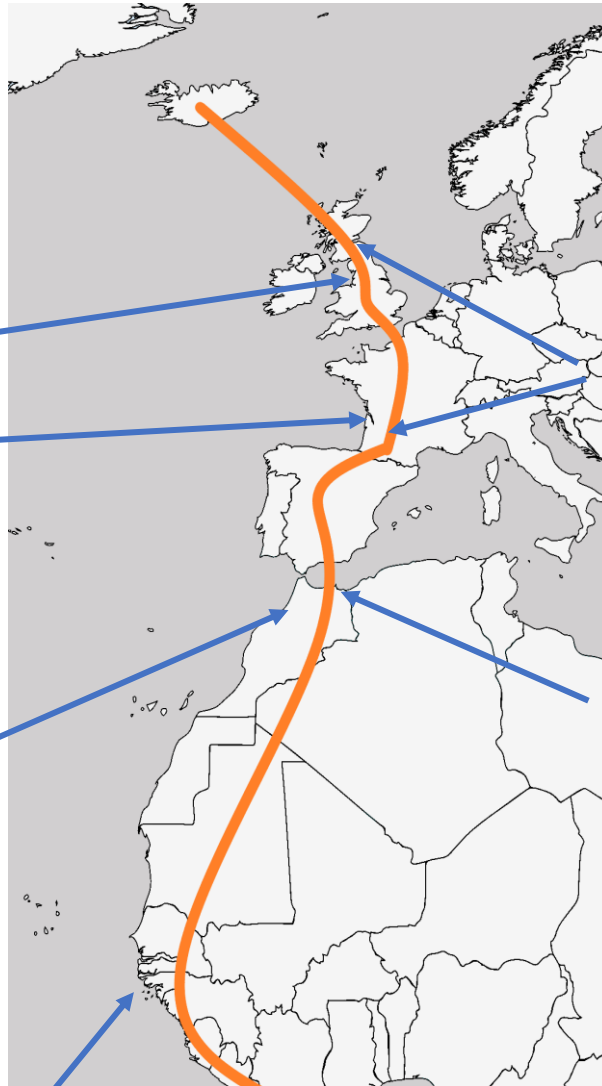
Arriving in Iceland or Scotland you spend some time there before flying 700 miles to France

## August/September

As you pass away your kids take up the mantle before they decide it's getting a bit cold and head another 870 miles to the South of Spain or Morocco to see out their days

## October/November

Your grandchildren decide that they fancy it a little bit warmer again and undertake a colossal 1500 mile flight to Sierra Leone



## April/May

Now it's the turn of your great-great grandchildren. They fly to France and give birth to your great-great-grandchildren who fly to where you called home!

## February/March

After retiring in Sierra Leone your great grandchildren rest peacefully as your great grandchildren start heading North again to Morocco or the South of Spain

## Dec/Jan

Your great grandchildren feel a bit adventurous and head on a 1500 mile round trip to Cameroon





# Super Senses

Butterflies are quite delicate creatures, but they are capable of amazing feats of survival. In order to stay alive they rely on their incredible range of senses.

Butterfly legs have scent receptors in them to help them find the ripest flowers, with the sweetest nectar. They also have taste receptors on them to make sure they've found the best food – butterflies can taste through their feet!

Their eyes are large and compound, they cannot see as sharply as we do but they have a much wider field of vision and can see colours, especially blues and greens, much better than we can. This helps them to see subtle colour variations in each other which might indicate who is the best mating prospect. The ability to see lots of blues might also help them spot predators approaching out of a blue sky. They can also see ultraviolet light – many flowers which look quite plain to us actually have ultraviolet patterns on them which we can't see, but which attract butterflies.

Butterfly antennae are incredible sense organs. They have scent receptors which can detect flowers from long distances. They can also smell other butterflies, helping them to find mates. They contain light detectors and a molecular clock which allows them to precisely track the position of the sun and know exactly where they are on Earth so they can never get lost! This lets butterflies like Painted Ladies and Monarchs take on incredible migrations

Their antennae (possibly along with hairs on their abdomen) can also detect pressure. This allows them to sense rain coming so they can shelter before it begins, but it also allows them to continually monitor windspeed and direction. They can even detect the wingbeats of another butterfly and can use this to identify what sex and species the other is!







# Make a butterfly feeder

Find a plastic bottle – any size will work – then cut off the bottom half.

Use a drill or punch to make a small hole in the lid – just big enough for a piece of string to fit through. Tie a knot in the string to make a seal at the hole and stop it falling through.

Punch two holes in the side for string so it can be hung somewhere in a sunny, dry spot. Put the lid back on, with the knotted string hanging from it.

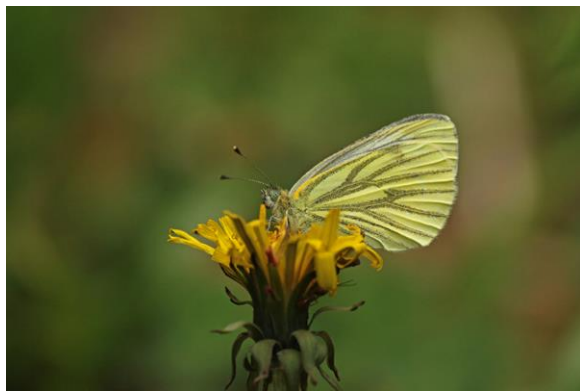
fill with butterfly food (recipe below) – it will soak into the string through the lid.



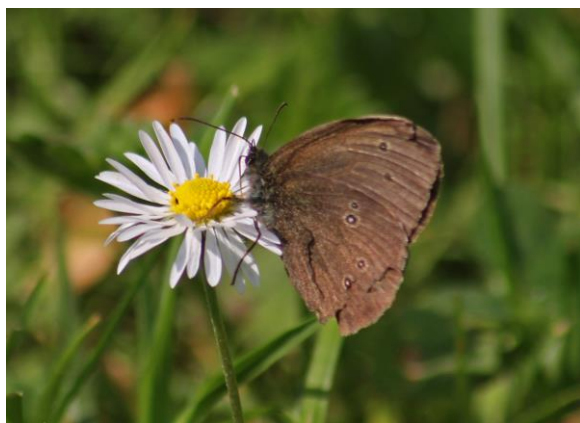
Butterfly Food Recipe : 1 teaspoon sugar; 1 teaspoon soy sauce; water. Mix Thoroughly.



**Peacock Butterfly (*Aglais io*).** Can be seen all year round as they hibernate over winter but awake on warm days. Seen from head on their body forms the shape of a large beaked face with two staring eyes to scare off predators. Primary food plant is the Common nettle.



**Green Veined White (*Pieris napi*).** Can be seen April to September in two – or sometimes even three - generations. There is no actual green colouring on the butterfly, the colour is a trick of the light caused by mixing yellow and black scales! Feeds on variety of plants such as garlic mustard.



**Ringlet (*Aphantopus hyperantus*).** On the wing from June to August. Chocolate brown with white edges and white spots – each surrounded by a white ring. Its dark colour helps it stay warm, meaning it can fly even on cloudy days. It feeds mainly on grasses – a grass heavy wildflower meadow is ideal.





# History and Folklore

The name 'butterfly' is a bit of a mystery, no one really knows where it originally came from. Shakespeare mentions them in the 16th century (which is older than any reference to 'flutterby' so the old story that the name simply changed over time appears to be wrong) and the modern name comes direct from the old English word butterfleoge. This may come from their occasional habit of drinking uncovered milk, or maybe even just the colour of some species' wings. Interestingly, in many parts of Europe the name is a derivation of butter ...'excrement' (as in the Dutch 'boterschijte') which may refer to the colour of their poo!

The Greeks and Romans believed that butterflies were the souls of dead people, this is probably linked to the transformation of a caterpillar into a chrysalis and its 'rebirth' as a butterfly. A butterfly fluttering over a spot, or flying hesitantly was a soul who could not move onto the next world, and it was common for butterfly souls to head back to a person's favourite place.

This belief in butterflies as souls or messengers from the dead persisted through history, in Ireland it was illegal to kill white butterflies as they were believed to be the souls of children.

In Scotland the colour of a butterfly was also significant – though it wasn't always consistent! In some places a golden butterfly was a good omen, a white butterfly was good luck and a red or brown butterfly was a witch in disguise!

Three butterflies together could mean either good luck, a change in the weather, the birth of a child – or certain death, depending on where the story comes from. The eyes on a peacock butterfly's wings were said to be the eyes of God (or the Devil) always watching human behaviour from the hedgerow.

What is clear is that butterflies represented change, life and death, and news from the 'otherworld'





# Colourful Camouflage

Some butterflies are amongst the most colourful and striking animals on Earth. At first thought this seems strange for an animal which is on the menu for so many other species – all sorts of creatures love to eat butterflies so why are they so conspicuous? Their colours aren't all made of pigments (like mammals), their wings are covered in tiny scales which contain even tinier structures (called nanostructures) which reflect light in special ways. Generally reds and blacks are pigment, blues, greens and metallic colours are reflectives.

Some species – like the monarch – are actually toxic, so their bright colours serve as a warning. Others which aren't toxic nevertheless use these colours to pretend that they are! Some use their bright colours like birds do, to signal to potential mates. Many of these species will have brightly coloured upper wings, and brown or green below, they can fold their wings and show the dull side if they want to hide. Some caterpillars take this further and are perfectly disguised as twigs, leaves or even bird droppings!

Another strategy is called 'dazzle' camouflage. This is where the bright colours, metallic sheens, complex patterns and shifting reflections are designed to confuse potential enemies. Peacock butterflies use a variation of this strategy by having large 'eyes' on their wings which are designed to scare off birds who think they are being looked at by a predator. Some caterpillars are disguised as snakes or spin glittering cocoons for the same reason.

People study these structures and techniques to help us too. Scientists are making new paints and surfaces which reflect light like butterfly's wings so they do not need to contain so many harmful chemicals. In World War 1 and 2 the Royal Navy even adapted the dazzle technique by painting some of their ships in bright, confusing colours and patterns to fool enemy submarines!





# Bit o' Art

Either try to copy the colours to the left or make your own design for the peacock butterfly!







# Butterfly spotter



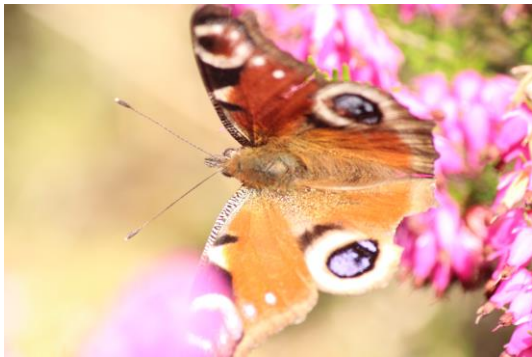
Tortoise shell



Ringlet



Any others you have seen? Make a note below and see if you can identify them!!



Peacock



Female/Male orange tip



Peacock caterpillars



Painted Lady







# Links

Go further with your Wild Ways Well activity by trying these links once you come home

**Cumbernauld Living Landscape** [www.cumbernauldlivinglandscape.org.uk](http://www.cumbernauldlivinglandscape.org.uk)

**Wild Ways Well** [www.cumbernauldlivinglandscape.org.uk/project/wild-ways-well](http://www.cumbernauldlivinglandscape.org.uk/project/wild-ways-well)

**Activities** [www.cumbernauldlivinglandscape.org.uk/get-involved/activities/](http://www.cumbernauldlivinglandscape.org.uk/get-involved/activities/)

**Facebook** [www.facebook.com/CumbernauldLivingLandscape](http://www.facebook.com/CumbernauldLivingLandscape)

**Twitter** [www.twitter.com/wildcumbernauld](http://www.twitter.com/wildcumbernauld)

**The Conservation Volunteers** [www.tcv.org.uk/scotland](http://www.tcv.org.uk/scotland)

**The Scottish Wildlife Trust** [www.scottishwildlifetrust.org.uk](http://www.scottishwildlifetrust.org.uk)

**SamH** [www.samh.org.uk](http://www.samh.org.uk)

**NHS Five Ways Well** [www.nhsinform.scot/healthy-living/mental-wellbeing/five-steps-to-mental-wellbeing](http://www.nhsinform.scot/healthy-living/mental-wellbeing/five-steps-to-mental-wellbeing)

**MIND coronavirus and your wellbeing** [www.mind.org.uk/information-support/coronavirus/coronavirus-and-your-wellbeing](http://www.mind.org.uk/information-support/coronavirus/coronavirus-and-your-wellbeing)

**Lanarkshire Green Health Partnership** [www.elament.org.uk/media/2229/19-ways-to-stay-connected-2.pdf](http://www.elament.org.uk/media/2229/19-ways-to-stay-connected-2.pdf)

**Butterfly Conservation Trust** [www.butterfly-conservation.org](http://www.butterfly-conservation.org)



[cumbernauldlivinglandscape.org.uk](http://cumbernauldlivinglandscape.org.uk)