FREE!
BEE POSTER

DESIGNER DUNG
Waste doesn't have to be wasted!

TRUE BLUE
How our seas store carbon

Issue 113 Spring 2025

Wildlife Watch

MAGAZINE

RAINFOREST RESCUE

Bringing back lost forests for birds, bugs, plants and people!

The Wildlife Trusts

Editor's corner

TOM HIBBERT
Editor, Wildlife Watch

Here at Wildlife Watch we love weird wildlife. The more bizarre the better! Luckily, the forests, fens, meadows, mountains, seas and saltmarshes of the UK are packed with peculiar plants, amazing animals and other strange species.

In this issue, we've got some real oddballs to introduce. On page 18 you can discover the poo pioneers. These incredible creatures see dung as more than something to just dump and leave. They've all found a way of using it to help them survive and thrive. Inspirational levels of recycling!

Have you ever heard of an underwater 'scorpion' that breathes through its bum? You can find out all about this water-loving wonder on page 22. Finally, we've saved the strangest species for our *Weird Nature* section. Head to page 16 if you're feeling brave enough to peek at some peculiar parasites!

Tom

GET IN TOUCH

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WILD THINGS

News from our Wildlife Watchers

LEAF LEGEND

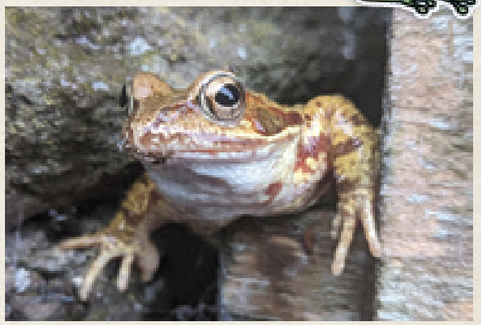
Five-year-old Edie from Suffolk raked fallen leaves into piles to make a winter home for hedgehogs, insects and spiders. Great work, Edie!

DINNER DATE

Solomon (aged 7) from London was having a family lunch when a heron flew past the window. They all rushed outside and watched the heron catch its own midday meal – three frogs!

LIGHTS, CAMERA, AMPHIBIAN!

Twelve-year-old Nathan took this incredible photo of a frog peeking out from its hidey hole.



HEDGEHOG HERO

Joesph (aged 7) from Warwickshire was inspired by Wildlife Watch to help hedgehogs. He made posters and put them up in local villages, along with a guide to making a hedgehog house.

Rainforest © Ben Porter

08

Adder by Watch reader, Alexa

Arctic tern © Tom Marshall

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Water scorpion © Jan Hamrsky / naturepl.com

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Pied flycatcher © Mark Hamblin/2020VISION

IN THIS ISSUE

Regulars

New!

Features

WILDLIFE WATCH 113

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The Wildlife Trusts Registered Charity No 207238

Check out **wildlifewatch.org.uk/privacy-policy** to find out how we keep your information safe.

What's Wildlife Watch?

Wildlife Watch is the junior branch of The Wildlife Trusts. Join Wildlife Watch and start your nature adventure. Prices range from £10-£24 per year for child-only membership and £30-£60 for family membership.

You'll receive a starter pack and four issues of Wildlife Watch magazine a year. This is packed full of amazing pictures, posters and competitions. We also have a really wild website and e-newsletter full of wild ideas and nature-spotting tips. Plus you get access to local events and groups. Go to **wildlifewatch.org.uk** to find out more.

KEEP WATCHING!

The Science Section

Always wondered what that weird-sounding word meant or desperate to know what the latest wonderful wildlife discovery is? Well, here we bring you a fact-packed science section so you can impress your friends with your knowledge!

WILD WORDS

Wow your friends with new words from the world of wildlife science!

COPROPHAGY
(ko-pro-fa-ji)
The act of eating poo – an essential part of the diet for many wild animals!

PRECOCIAL
(pri-ko-shul)
A young animal that can move around and feed itself almost as soon as it is born or hatched from an egg. Ducklings are precocial.

IRIDESCENT
(iri-des-nt)
A bright colour that seems to change when seen from different angles. The green head of a male mallard is iridescent.

RECENT DISCOVERIES

Scientists studying bird migration have discovered that birds of prey can hunt for food thousands of metres above the ground. A tracking tag on a grey plover, a species of wading bird, revealed that it was caught by a peregrine falcon almost 3,000 metres above the ground! Scientists were using tags to follow the migration of eight grey plovers across Europe. The signal from one tag showed that the bird suddenly stopped migrating. They found the tag and the remains of the bird a short distance from a peregrine falcon nest.

Peregrine falcon © Bertie Gregory / 2020VISION

Southern right whale © Gabriel Rojo / naturepl.com

A RIGHT OLD AGE

Scientists in Alaska have revealed that southern right whales can live for more than 130 years, with some possibly reaching 150. They used to think these whales only lived to be 70-80 years old! The scientists also studied North Atlantic right whales, but found that very few of them survived past the age of 50. Sadly, this isn't because of natural causes, but a result of human actions. They often get caught in fishing gear or are hit by ships.

YOUR STORIES

This issue, we received some fantastic poems we wanted to share with you!

Robin with worm © Neal Smith Photos

In the beak of a bird
by Melissa, aged 9

As I wiggle and go, oh no –
The beak of a bird looking for his lunch – crunch!
A whole flock of birds wanting a snack –
Smack!
A beak closes round me as I wiggle to be free
Try as I might the bird takes flight.
I wriggle and squirm,
But a bird is no match for a worm.
I drop to the ground – such a way down.
Hey!
I'm going up now –
Wow!
In the beak of a bird I soar around –
Such a way down to the ground.
Uh oh!
A nest with a bird hoping for a rest.
With some jiggle and some wiggle I get free,
Hurrah for me!
Down in the soil – free from the toil,
No bird has heard of that before, I'm sure.

Spring
by Poppy, aged 9

The days get longer,
The sun shines more brightly,
The nights get shorter,
The lambs are sprightly.
Buds on garden plants emerge,
Shoots push through the warming soil,
Wildlife from hibernation reappears with a surge,
Light and warmth returns to earth,
Leaves appear on the trees that were bare,
Easter on the horizon,
Celebration in the air.

THANK YOU to Melissa & Poppy

Do you want to be featured in the magazine? Send your stories, ideas or photos to watch@wildlifetrusts.org!

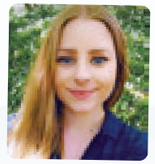
Discover the crucial role our seas play in the carbon cycle

BLUE CARBON

by Daniele Clifford

Carbon is the basis of all life on earth. Nature moves carbon between the land, seas and air through the carbon cycle. But our actions have upset this balance. There is now too much carbon in our atmosphere, driving climate change.

The seas hold huge amounts of carbon, which we call blue carbon. It is caught by and stored in animals and their habitats – from whales to plankton, muddy seabeds to seaweed forests. But these blue carbon habitats can be damaged by construction or dragging heavy fishing nets along the seabed. This is why it's important we take care of our seas!



DANIELE is marine conservation officer for The Wildlife Trusts. From whales to corals, she's passionate about the incredible wildlife around UK coasts.

RAIN AND RIVERS

Rain and rivers can wash carbon off the land and into the sea.

Did you know 244 million tonnes of carbon is stored in just the top 10 cm of seabed habitats around the UK and Isle of Man!

SALTMARSH

Saltmarsh plants capture carbon through photosynthesis. Some of this carbon gets stored in saltmarsh soils, along with carbon washed up from the sea or rivers.

Photosynthesis is when living things like plants take in carbon dioxide and water, then use sunlight to turn it into sugar and oxygen.

PLANKTON

Phytoplankton are tiny plant-like organisms that capture carbon through photosynthesis. They float around the ocean, along with fragments of seaweed and other small bits, eventually falling to the seafloor like snow.

SEAGRASS

These plants also capture carbon through photosynthesis and store it in the seabed, alongside other carbon that gets buried in the mud.

SEA CREATURES

From whales to shrimp, all animals contain carbon. When they die and sink to the seafloor, some of the carbon in these animals will be stored in the seabed.

SEAWEEDS

Like plants, seaweeds capture carbon through photosynthesis. Some of these seaweeds break free and are buried in the seabed, locking the carbon away.

MUD

The marvellously muddy seafloor is the superstar of storing carbon at sea – it's the biggest blue carbon habitat! Carbon that falls as marine snow is buried in the mud.

LIVING REEFS

Some animals – like blue mussels – make reefs in our seas. These reefs have lots of nooks and crannies that trap particles of carbon. They're also the perfect home for wildlife.

Illustration by rachelhudsonillustration.com

Saving these wonderful woodlands

RESTORING RAINFORESTS

Did you know there are rainforests in the UK? These ancient habitats used to cover one fifth of our land, but now only a few scattered woodlands are left. The Wildlife Trusts are working hard to bring them back!

by Tara Cummins

TARA loves woodlands and listening to buzzards calling as they fly over her house. She works for The Wildlife Trusts, helping to restore rainforests.

All photos © Ben Porter

Turkeytail, jelly ear and chicken of the woods are all fungi that can be found in rainforests.

Turkeytail

Temperate, not tropical

Our rainforests are different from tropical ones. You won't spot any colourful parrots or monkeys swinging in the trees, but they are just as magical! Temperate rainforests are really wet and green and mossy. Their ground is covered with ferns and spongey plants. The trees are often hundreds of years old, so grow twisted and gnarly. In a very old forest, there can be so many lichens and mosses growing on a tree, you won't be able to see its trunk!

It's wet in the west

Temperate rainforests need very specific conditions to grow. They like places that get more than 1.4 metres of rain every year, as well as clean air and steady temperatures: not too hot, not too cold. You might hear them referred to as Atlantic rainforests, since our Atlantic coastline is where these conditions are found. Scotland, Wales, the Isle of Man, Devon, Cornwall, Cumbria, Yorkshire, Lancashire and Northern Ireland all have small fragments of rainforest left.

Our largest new nature reserve at Skiddaw in Cumbria will need 300,000 trees planting.

Bonnet fungi

Forest threats

Different threats over many years have meant that temperate rainforest has gone from covering 20% of the UK to covering just 1%. These forests are now rarer than tropical rainforests!

In the past, rainforests were cut down and replaced with fast-growing trees for timber production. In other areas, invasive species like rhododendron outcompete native plants for the same resources. Diseases like ash dieback are now more common and can wipe out whole forests. Climate change is also making it harder to find the specific conditions that rainforests need to thrive.

Rainforest rescue

The good news is that many people now see the importance of our native rainforests and are working hard to restore them – The Wildlife Trusts are among them!

We are creating new nature reserves in areas with the right conditions for temperate rainforest, then planting different mixes of trees to suit the area. As well as planting new trees, some trees will be able to grow on their own by a process called natural regeneration. This is where seeds from existing adult trees are dispersed and take root, creating new life without any human help. We'll also look after any other wildlife habitats already on the reserves, for example peat bogs, heathlands and meadows.

Tunbridge filmy-fern

Temperate rainforests can also be found in Canada, Japan, Chile, Tasmania and Norway.

Pied flycatcher

Wildlife watching

As new rainforests grow, it will be very important to monitor changes to the soil, water and temperature to see how the area changes. We'll be looking out for different bats, butterflies and birds too, to indicate how healthy our forests are. Birds like redstarts, tree pipits and pied flycatchers all fly to temperate rainforests to breed each summer. Their presence will prove the positive impact of our new forests.

Ferns

CONSERVATION CHAMPIONS

Each issue, we're introducing a different person working hard to save WILDLIFE in the UK!

Indy Kiemel Greene

Indy speaking up for nature at last year's Restore Nature Now march in London

© Matt Bristow | mattbristow.net

INDY is 19 and lives in Sherwood Forest. He volunteers with the Nottinghamshire Wildlife Trust, British Trust for Ornithology and the RSPB, for whom he is a youth council member and ambassador.

Where does your love of nature come from?

Growing up in Sherwood Forest, I couldn't help but fall in love with nature! The forest was my playground: big mature oaks for climbing, frozen wintry puddles for skating. In summer those same pools were home to dragon and damselflies. One of my favourite memories as a child was a huge emperor dragonfly hovering just inches from my nose – I think I was a bit big for its usual menu!

How have you been helping nature recently?

Last summer, my partner and I walked the length of the UK – Land's End to John o' Groats via the Outer Hebrides – raising money for the Hebridean Whale and Dolphin Trust. We walked for 107 days raising more than £21,000. We had to battle the British weather, ticks and Scottish midges! Nevertheless, it was the happiest I've ever been, seeing the amazing wildlife, coastline, changing seasons and meeting kind people along the way. It was amazing.

What's your proudest moment as a conservation champion?

I discovered that goshawks regularly flew over a disused barn by my house to roost in the woodland behind. After sharing photos of the birds on social media, BBC Springwatch got in touch about filming them. The hard work for me really began after that phone call. I had to work out all the details, including getting permission from the landowner. In the end, we recorded a lovely film and the goshawks (now my favourite bird) put on a great show for us all.

Goshawk juvenile © Pete Richman

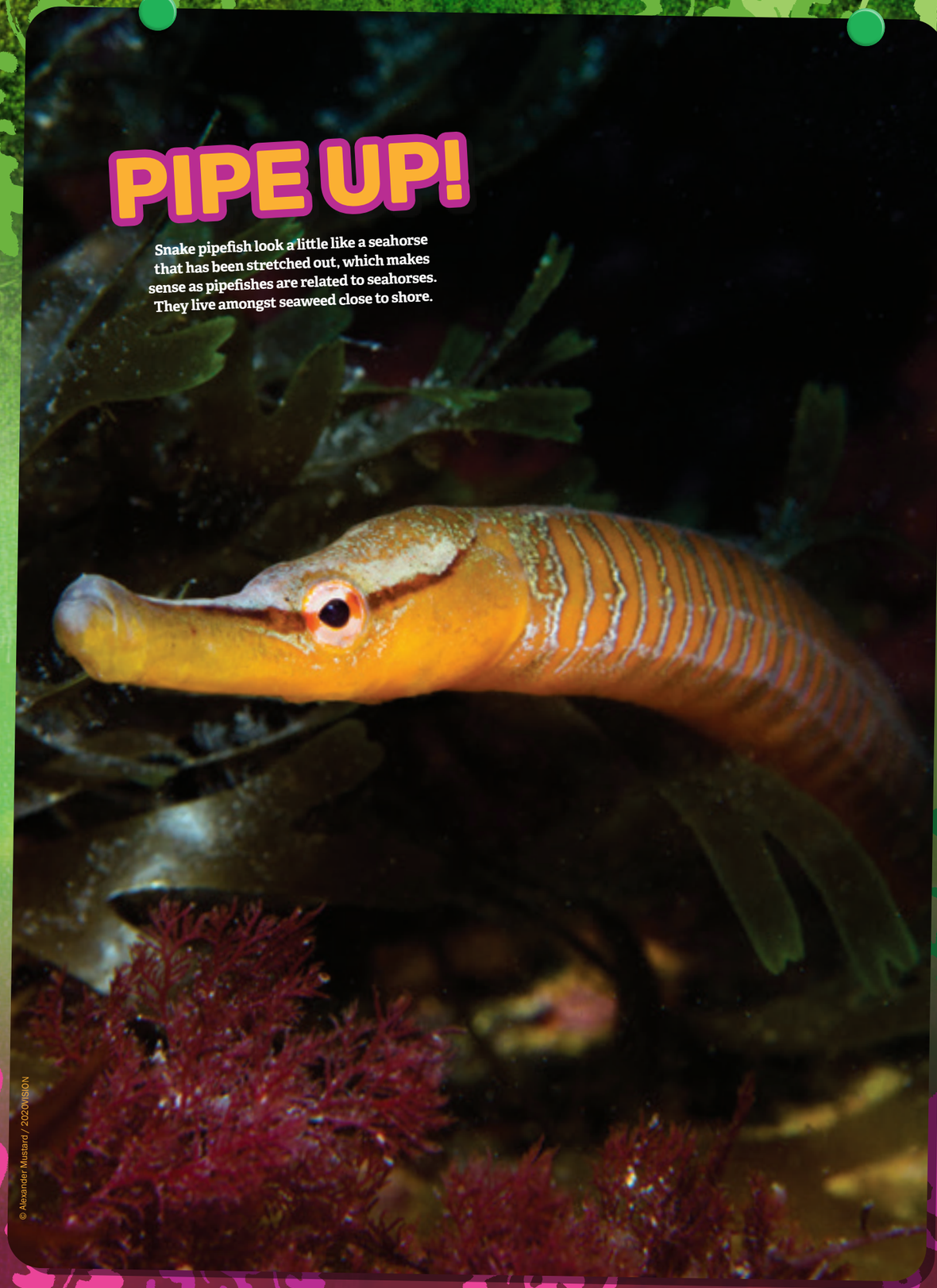
What advice would you give young people to help them become conservation champions?

To be a conservation champion, you have to find your niche – find what you love. That could be a species you want to save, or you might want to make your garden or local community more green. You could try digging a pond or, maybe one day, you might be crazy enough to do a long-distance walk or bike ride for a wildlife charity! My point is, nothing you can do is too big or too small to make you a conservation champion. Don't believe anyone who tells you that you can't make a difference – if everyone chips in, together we will make a difference!

SHERWOOD FOREST

PIPE UP!

Snake pipefish look a little like a seahorse that has been stretched out, which makes sense as pipefishes are related to seahorses. They live amongst seaweed close to shore.



© Alexander Mustard / 2020VISION

Nests are the BEST... but it's not just birds that build them!

The NEST BEST THING!

by Pete Dommett

Hazel dormouse nest © Terry Whittaker / 2020VISION

Nests come in all sorts of shapes, sizes and styles. Most are built for breeding in, but they're also used for other purposes. A nest can be home to just one animal or a colony of thousands!

Three-spined stickleback nest © Oriol Alamany / naturepl.com

FISH NESTS

A male stickleback glues his nest together with a sticky substance produced in his kidneys called 'spiggin'!

Yes, it's true – some fish build nests! The male **three-spined stickleback** makes a dome-shaped nest from bits of pond weed at the bottom of a stream. The fancier his creation, the more likely it is to attract a female. She may lay up to 400 eggs in this natty nest!

Brown trout and **Atlantic salmon** also make nests to lay their eggs in. The female fish scrapes out a shallow nest – called a 'redd' – on the gravelly riverbed.

Red squirrel gathering nest material © Pete Richman

MAMMAL NESTS

Small mammals also build nests to breed in. In spring and summer, **harvest mice** and **hazel dormice** weave cosy, round 'nursery nests' from leaves and grass to raise their babies in. Harvest mice also make simple nests (a bit like sleeping bags!) to shelter in during bad weather and dormice build different nests to hibernate in during the winter.

Red squirrels live in nests known as 'dreys'. These untidy, twiggy bundles are often built high up in trees. A red squirrel usually has several dreys that they use for both breeding and sleeping in.

A harvest mouse's breeding nest is the size of a tennis ball. A red squirrel drey is about the size of a football.

PETE is a wildlife writer. He once walked 15 km to see an eagle's nest!

INSECT NESTS

Red wood ant nest © Ross Hoddinott / 2020VISION

An ant nest can be home to half a million ants!

Wasp nest © Frank Porch

Some of the largest nests are made by some of the smallest creatures! **Common wasps** chew wood up into a pulpy paste and use this to build their huge nests. Just one nest can contain up to 10,000 growing wasp grubs!

Red wood ants also build big nests. These massive mounds are made from soil, twigs, leaves and dried grass and can be up to two metres tall! Each nest contains special chambers in which the ant colony stores food, eggs, larvae and even the queen ant!

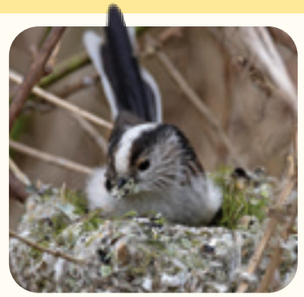
BIRD NESTS

Great crested grebe nest © Frank Porch

The best nest-builders are definitely birds! They make nests so they have a safe place to lay their eggs and raise their chicks. But they don't always put them in trees! Some birds (such as **swifts, swallows** and **house martins**) build their nests in buildings, others (including **oystercatchers** and **terns**) prefer the ground and a few (such as **kingfishers** and **puffins**) nest in underground burrows. Or how about a **great crested grebe**? This graceful bird's nest floats on water!

While some nests are a simple collection of sticks (check out a **woodpigeon's** flimsy construction!), others are more creative – the nest of a **long-tailed tit** is made from lichen, moss, feathers and hair, all glued together with spiders' webs! And birds' nests can be tiny (the inside of a **goldcrest's** nest measures only 9 cm across!) or, like the nest of a **white-tailed eagle**, as big as a double bed!

Male **wrens** build as many as 12 nests. The female wren chooses her favourite!



Long-tailed tit building a nest © Robin Chittenden / naturepl.com

NEST – a structure made by birds, and some other animals, to hold their eggs or young or to live in.

Blackbird nest © Tom Hibbert

GALLERY

Send in your poems, photos and artwork of UK wildlife for your chance to feature in the gallery. If your artwork is picked as the star entry you'll win your very own drawing kit!
The perfect starter set for any budding wildlife artist.

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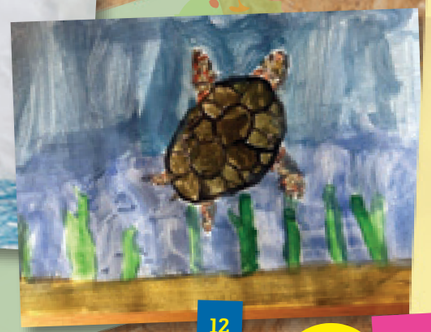


1) Woodland thunderstorm by Emmeline, aged 7
There's so much to look at in this dramatic scene!

2) Lapwing by Charlie, aged 13
This is a superb study of a beautiful bird.

3) Adder by Alexa, aged 8
It must have taken ages to draw all those scales, great job!

4) Shaggy inkcap by Lily, aged 8
Amazingly, this art was made with the ink from a shaggy inkcap!

5) Hedgehog by Ava, aged 7
Ava got very creative with this hedgehog collage.

6) Badger by Jake, aged 10
What a brilliantly baked badger cake.

7) Lynx by Adamine, aged 5
This awesome artwork looks like it was inspired by our autumn issue.

8) Lake scene by Thomas, aged 10
We love the way Thomas framed this scene in a circle.

9) Man o' war by Penny, aged 9
Penny loves jellyfish and the man o' war – which she pointed out to her mum is not actually a jellyfish!

10) Swallow by Lizzie, aged 8
We love the texture created by printing this swallow.

11) White-tailed eagle by Ruby, aged 7
Ruby is moving to Scotland and is excited to see eagles in the wild.

12) Turtle by Orlaith, aged 7
What a wonderful underwater watercolour!

HOW TO ENTER

Email **watch@wildlifetrusts.org** with the subject line 'Gallery entry' or write to us at:

Wildlife Watch Gallery
The Wildlife Trusts
The Kiln, Mather Road
Newark
Notts NG24 1WT

If we feature your artwork we will need your first name and your age, so don't forget to include them. We might also share it on our website and social media.

WEIRD NATURE

PARASITES live on or inside another living thing, feeding on their host. Parasitoids are insects whose larvae are parasites that eventually kill their host.

Warning: these creatures are seriously creepy, so skip this section if you're squeamish!

THIS ISSUE: PARASITES AND PARASITOIDS

GREEN-BANDED BROODSAC


© Stevie Smith

This freaky flatworm does strange things to snails. Adults live in a bird's bum, laying eggs in its poo. Snails eat the poo with its hidden eggs. The eggs hatch and grow into broodsacs – little blobs full of larvae. These blobs fill the snail's antennae and wriggle like a worm. This attracts birds, which eat it – allowing the young flatworms to become adults and start the cycle again.

MEDICINAL LEECH


© Will Atkins

These large leeches live in shallow pools and ditches, where they use a sucker to attach to animals and feed on their blood. They are now very rare. Doctors used to use them to drain blood from patients. Millions of leeches were caught and sent to Europe and America, threatening their natural population.

HORSEHAIR WORM


© Alastair Rae

These weird worms live in water and lay their eggs on plants. The eggs (or larvae if they hatch first) get eaten by insects or other creatures. The worm then grows inside that creature. Amazingly, some horsehair worms use a sort of mind control on their host. They release chemicals that change the host's behaviour, making it jump into water so the adult worm can swim out.

ICHNEUMON WASPS


© Ed Marshall

There are lots of different ichneumon (pronounced ik-nyoo-muhn) wasps in the UK. They lay their eggs on (or sometimes inside!) other invertebrates, such as caterpillars. The young wasps live in the invertebrate's body, feeding on its insides. Eventually they kill their host, turn into adult wasps and fly away.

CRAB HACKER BARNACLE


© Sion Roberts

Female crab hackers burrow into a crab. They release chemicals that stop the crab from growing so they can take all of its energy. If it's a male crab, the chemicals change its body to be more like a female. The barnacle grows an egg sack that bursts from the crab's belly, where a crab would normally keep its eggs. The crab even protects the eggs like they're its own! A male barnacle then finds the sack and fertilises the eggs.

TWISTED WING PARASITE


Male *Stylops melittae* © Jaco Visser

These odd insects target mining bees. Young parasites wait on flowers to hitch a ride on a passing bee. They ride the bee back to its nest, where they burrow inside a young bee. As the bee grows, so does the parasite. Eventually it pokes out from the bee's back. Female parasites wait there for a male to arrive. Male parasites have wings, so they fly off to find a female on another bee.

wildlife watch

Make a nature mandala

The word 'mandala' is Sanskrit for circle. The circular shape symbolises how nature doesn't begin or end, but is always connected.

You will need

- Bags or baskets to collect natural materials
- Natural materials:
  - Sticks
  - Grass
  - Leaves
  - Feathers
  - Pebbles
  - Pine cones
  - Flowers

Only pick from your own garden and leave plenty for pollinators!

1. Head outdoors and collect your natural materials. Try to find a few of the same thing as this will help with your shape (eg. five yellow leaves, four twigs of equal length).
2. Find a flat surface – maybe a table or even your lawn or yard outside. Place one of your finds down first to act as the middle of the mandala.
3. Use the rest of your finds to make a pattern coming out from the centre. Consider the symmetry of your pattern, making one side mirror the other. You can be as creative as you like.
4. Remember to take a photo of your finished mandala!

www.wildlifewatch.org.uk

Illustration: Corinne Welch © Copyright Royal Society of Wildlife Trusts 2020

Meet the wildlife doing weird things with waste!

POO PIONEERS

by Tom Hibbert

When animals eat food, their body takes useful nutrients from it and gets rid of the rest. But just because it's waste, doesn't mean it has to be wasted! Lots of animals have found unusual ways to make the most of their POOP...

POOP POTTERS

Hazel pot beetle © Roger Key

When a female **HAZEL POT BEETLE** lays an egg, she covers it in dung. Then she drops the egg and its protective poo pot onto the ground. After the egg hatches, the young beetle makes a hole and pokes its head out to feed and move around, dragging the pot with it like a snail. It feeds on fallen leaves of birch, hazel or hawthorn. As it grows, it uses its own poo to make the pot bigger. When it's fully grown, it seals up the opening and pupates inside. The adult beetle breaks out, climbs a plant and flies to the treetops.

BIRD BOMBERS

Arctic tern © Tom Marshall

Getting covered in poo can be an upsetting experience. Many birds turn their waste into a weapon, flying above potential predators and pelting them with poop. **TERNS** will sometimes swoop down at anything approaching their nest and hit it with well-aimed droppings. If something sneaks up on **GREY PARTRIDGES** at night, they usually release a shower of poo as they fly off. A covey of 15 partridges can produce 60 droppings, splattering a huge area!

DRESSED IN DUNG

Thistle tortoise beetle larva © Tom Hibbert

Young **THISTLE TORTOISE BEETLES** have a clever trick for hiding from predators. They use their own poo as camouflage! The beetles make a little shield out of their own droppings and dead skin, using their tail spikes to hold it above their back. This makes them look like a pile of poo on a thistle leaf, rather than a tasty snack for a bird.

SMELLY SIGNS

Otter © Margaret Holland

Mammals often use their poo to send a message. They leave droppings to let other animals know that this is their territory. **OTTER** poos are called spraints. They leave them in obvious places, such as large rocks on riverbanks. When another otter finds them, the smell can reveal things about the otter that left the spraint, such as whether it was male or female. They might even recognise the smell of the otter that left it.

NOXIOUS NURSERY

Dung beetle *Rhodaphodius foetens* © Frank Porch

To many **DUNG BEETLES**, a big pile of poo can be the perfect place to raise a family. Some dung beetles are known as dwellers, as they live inside the dung. They lay their eggs in the dung, too. When the eggs hatch, the beetle larvae are already surrounded by their favourite food! But just because you eat poo doesn't mean you can't be picky – dung beetles are known to select small particles with lots of nutrients.

WARNING WASTE

Large pine weevil © Frank Porch

LARGE PINE WEEVILS feed on the bark of trees. Females gnaw a hole in a root, lay their egg inside and often poo next to it. Then they seal up the hole with poo and bits of bark. Chemicals in their poo put off other large pine weevils, preventing them from feeding on that part of the tree. This makes sure the eggs stay protected and the young beetles will have plenty of food when they hatch.

The growing power of plants

SUPER SEEDS

by Louise Colville

Oak growing from seed © Alan Price / Gatehouse Studio

WHAT IS A SEED?

Many plants start life as a seed. Seeds contain an embryo, which will grow and develop into a plant, along with energy reserves to help the seedling grow. All this is encased in a protective seed coat. Seeds come in many shapes and sizes, from tiny orchid seeds to the massive double coconut, which can weigh up to 18 kg. Seeds can sometimes travel long distances and wait years for the right conditions to germinate and grow.

EXTREME SEEDS

Seeds have some impressive survival strategies. Many UK plants produce their seeds in autumn. To avoid growing in the cold, wet winter, the seeds wait until spring before germinating. This is called dormancy. Some seeds can stay dormant for years waiting for the right signals to germinate. Seeds of wetland plants buried when their ponds were filled in have been found alive after 150 years – making seeds the ultimate time travelers!

Most seeds grow in soil, but mistletoe seeds glue themselves to the branches of trees. The parasitic mistletoe sucks water and nutrients from its host tree as it grows. Seeds are not just found on land – seagrass seeds survive and grow in salty seawater. Seeds are also super tough. Many can survive freezing, whilst some can even survive the extreme temperatures of wildfires.

The oldest living seed was a date palm seed that survived for 2,000 years!

Mistletoe seed © Gary K Smith / naturepl.com

LOUISE is a seed scientist and works for the Royal Botanic Gardens, Kew at the Millennium Seed Bank at Wakehurst.

SPREADING OUT

For the best chance of survival, seeds need to find space to grow away from the mother plant. Some just rely on gravity, others such as gorse have exploding seed pods that can fire their seeds several metres! Seeds can also be spread by wind, water and animals:

Coconuts and other drift seeds can float long distances, even crossing oceans.

Dandelion seeds © Katrina Martin / 2020VISION

WIND

Sycamore seeds have a large wing that makes them spin like a helicopter, whilst dandelion seeds have an umbrella of fluffy white hairs. These help the seeds travel on the wind.

Sycamore seeds © Vaughn Matthews

BIRDS AND MAMMALS

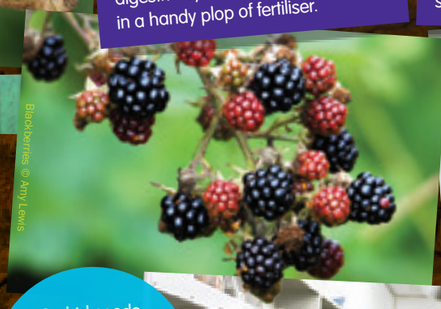
Greater burdock seeds have hooks and hitch a ride on the fur of passing animals. Other seeds are hidden inside tasty fruits like blackberries. When they are eaten, the seeds pass through the digestive system and are deposited in a handy plop of fertiliser.

INVERTEBRATES

Ants, slugs and even earthworms also spread seeds. Wood anemone seeds have a fatty appendage called an elaiosome. This attracts ants, which take the seeds back to their nest so their larvae can feed on the fat. Slugs also find the elaiosome a tasty treat – they swallow the seeds whole and deposit them later in their poo.

WATER

Seeds of common alder trees, which grow on riverbanks, also have wings, but theirs are water wings that help the seeds float along the river.



Blackberries © Amy Lewis

Wood anemones © Guy Edwardes / 2020VISION

SAVING SEEDS

Farmers and gardeners often save seeds to sow later. The same approach is used to save seeds of wild species for conservation. Dry seeds can live for years and most are quite small, so lots can be stored in a small space. There are seed banks all around the world that conserve seeds of wild and crop plants. The largest global seed bank for wild plants is Kew's Millennium Seed Bank at Wakehurst, Sussex. Here seeds are stored in big underground freezers. The Millennium Seed Bank is celebrating its 25th anniversary in 2025 and now has over two billion seeds of 40,000 plant species from more than 190 countries! Some species are threatened or even extinct in the wild. By storing the seeds, we can protect the variety of plants and grow them in the future.

Orchid seeds are so tiny they are like a speck of dust. The black dots in vanilla ice-cream are orchid seeds!

Millennium Seed Bank © Jim Holden / RBG Kew

FEATURE CREATURE

WATER SCORPION

© Jan Hamrsky / naturepl.com

POND PROWLING BUGS

Water scorpions aren't actually scorpions. They are a species of bug, related to shieldbugs. They live in shallow water in ponds and lakes, as well as in slow-moving streams. Water scorpions aren't great swimmers; they prefer to scuttle about on underwater plants or on the mud at the bottom of the pond. They sometimes leave the water and walk across land, mainly at night. Water scorpions have wings, but most aren't able to fly because their flight muscles aren't strong enough.

SNORKEL BUMS

Water scorpions have a long tail, but it isn't a stinger – it's a snorkel! It's called a siphon and they poke it up out of the water to suck in air. The air is carried down to breathing holes on the water scorpion's body. They can trap a bubble of air here, like a scuba tank, so that they can keep breathing even when their siphon doesn't reach the surface.

ESSENTIAL FACTS

Scientific name

Nepa cinerea

Size

3.5 cm

Amazing fact

Water scorpions are closely related to water stick insects.

ODD EGGS

Female water scorpions lay their eggs on plants close to the water's surface. The eggs have long hairs on them that reach up out of the water, helping bring fresh oxygen into the egg. The young water scorpions are known as nymphs and look like mini versions of the adult, but without the long siphon on their bum.

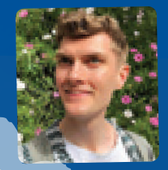
MOSQUITO MUNCHERS

Water scorpions are predators. They hide amongst fallen leaves, mud and pond plants, waiting for a suitable snack to swim past them. Then they pounce, catching their prey with their pincer-like front legs. They use their sharp beak (called a rostrum) to stab into their meal and suck up the insides. They'll hunt just about anything that's small enough to catch, including lots of midge and mosquito larvae.

Water scorpion with ant © Jan Hamrsky / naturepl.com

WHY IS THE UK SO RAINY?

by Jonathan Vautrey



JONATHAN is a Meteorologist at the Met Office. His favourite clouds are cirrus clouds.

© SCOTLAND: The Big Picture / naturepl.com

HOW RAINY IS THE UK?

We're certainly used to a rainy day here in the UK. It can sometimes feel as if Mother Nature has placed a never-ending rain cloud overhead. You would be right to think the UK receives more rainfall than many other countries – we're one of the rainiest in Europe.

Raindrops are usually drawn in the shape of a teardrop, but they actually look more like a jellybean whilst falling.

The wettest spots of the UK can see four metres of rain in an average year, which is the height of an African elephant! These sites are found in mountainous regions across the west of the UK, such as Eryri, the Lake District and the Scottish Highlands. The mountains also help to shelter the regions behind them. That means those in the east typically receive half the amount of rain that falls across counties in the west.

WHY IS IT SO RAINY?

Weather systems around the UK usually travel from west to east. We often see them developing in the Atlantic Ocean before moving towards Europe. This means the UK is one of the first land areas they encounter on their journey. Much of the rain they bring falls across the UK, then the system weakens as it moves further into the continent. This also explains why western areas of the UK are wetter than the east.

Why do weather systems travel in this direction? We've got the 'jet stream' to thank for that. This is a fast-flowing ribbon of air high up in the atmosphere. It helps to guide the weather systems towards the UK.

Snake's-head fritillary © Guy Edwardes / 2020VISION

WILL CLIMATE CHANGE AFFECT UK RAINFALL?

Climate change is already having visible effects on the world and in the UK. This includes changing rainfall patterns. Rising temperatures result in a warmer atmosphere. Warmer air can hold more moisture. Therefore, when rainfall events occur, they are producing more rain. All areas of the UK receive more rain on average now than they did 50 years ago. We particularly feel this during the autumn and winter months, where climate change has made UK storms 20% more intense in terms of the amount of rainfall.

Increasing rainfall will have notable impacts. Flooding will become more likely, bringing a greater risk of damage to buildings. Some crops may become harder to grow due to the wetter winters.

The UK's wettest day on record was the 3rd October 2020, when the rain across all nations was enough to fill Loch Ness!

COMPETITIONS

WIN BUILD-YOUR-OWN MICROSCOPE

This super cool microscope is easy to assemble using slot together techniques – no glue, no mess, no fuss! It's perfect for examining garden minibeasts, leaves, feathers and more. The lens tube even detaches so you can take it outside for on-the-go exploring.

We've got TWO microscopes to give away!

RRP: £22.99

Buy online at **buildyourownkits.com**

FOR YOUR CHANCE TO WIN:

Draw a minibeast and send us your drawing. It could be real, or one you made up!

WIN BUTTERFLY MEADOW POT

This amazing kit contains everything you need to make a mini meadow for butterflies! It includes three bamboo pots, three saucers, peat-free growing medium and 12 seed balls packed with wildflower seeds. Grow colourful plants that butterflies love to visit, like red campion, forget-me-not and musk mallow.

We've got THREE kits to give away

RRP: £20.00

Buy online at **seedball.co.uk**

FOR YOUR CHANCE TO WIN:

Just tell us your favourite butterfly!

WIN FLUFFY, FLYING SEED

Follow the life cycle of a dandelion: how it grows, protects itself, reproduces and transforms from a bright yellow flower into a delicate white ball of fluffy, flying seeds. This book is perfect for younger readers aged 4-8. It features beautiful illustrations, a fold-out map and an I-Spy game.

We've got FOUR copies to give away!

RRP: £10.99

Buy online at mamamakesbooks.com

FOR YOUR CHANCE TO WIN:

Answer this question. How much can a double coconut weigh?

a) 18 kg b) 20 kg c) 25 kg

CLUE: The answer is in the magazine!

If you're sending multiple entries, please try to put them in one email to save energy!

COMPETITION RULES

Send your competition entries to us: **By email** watchcomps@wildlifetrusts.org **By post** Wildlife Watch, The Kiln, Mather Road, Newark, Nottinghamshire NG24 1WT

Don't forget to include your name, age and a way of contacting you about your entry! **DEADLINE: 31 May 2025**

Competition entries may be used on our website and social media channels.