NOVEMBER / DECEMBER 2018 | Issue 22

NEW NATURE

BSBI

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ON THE COVER

Our wonderful cover shot this month was taken by Oscar Dewhurst.
Oscar is an award-winning wildlife photographer from London. He has taken photos in locations ranging from the side of the A1 in London to waxwings to the heart of the Peruvian Amazon.
Find him on Twitter @OscarDewhurst and online at www.oscardewhurst.com

Images: 12, Oscar Dewhurst; 44, Mya Bambrick; 30, Amber Hopgood; 14, Camila Quinteros Peñafiel; 36, Harriet Gardiner; 10, Bryony James; 38, Rebecca McHugh; 32, Dave Steere; 22, Zach Haynes; 28, patrickkavanagh; 8, smudge 9000;

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WELCOME TO

NEW NATURE

Autumn leaves drift through the air, caught and propelled in a gust of wind before they touch down to the earth – this season is in full swing now, and winter is creeping ever nearer. The cold mornings will soon see frost cling to the crisped leaves and car windows, as the man-made and natural world are touched by the seasonal change.

Despite the chill in the air, this time of year is an exciting one for wildlife watchers as there is still much to discover from family groups of choughs to winter roosts – Elliot Dowding tells us more on p8. Take a coastal walk this winter in Devon, as Bryony James shares the places she loves to visit (p10), perhaps you'll spot a glorious cormorant, our cover star this month (p12), or catch sight of the irresistibly cute seal pups found around the coastline at this time of year – Hannah Rudd explains all about this species on p17. Our ocean focus continues as I discuss plastic pollution and the beauty of our seas with BBC *Springwatch* presenter Gillian Burke, who also tells us about her career in natural history filmmaking (p24).

The short days of winter and the nearing of the end of the year allow time for reflections about the brilliant conservation projects and the spell-binding wildlife encounters that have occurred this year. Alexandros Adamoulas reveals his experience volunteering with the Little Tern Recovery Project in Dorset (p28), while Ellen Goddard looks forward to the New Year and the BSBI's annual New Year Plant Hunt (p32). The natural environment has such an important influence on our physical and mental health, and in this issue Elliott Kelly delves into why this is (p34), while Rebecca McHugh focuses on the importance of our peatlands (p38). We also talk to Jeff Knott, the RSPB's Regional Director for Eastern England, about how his career has developed, and advice he has for young naturalists, plus his favourite wildlife reserves.

There is much to love about the transition of autumn into winter, a time when the branches are not yet entirely bare, the frost not yet completely severe, and there is plenty of wildlife to see, too. We hope that when you come back home to warm up from your outdoor explorations, you sit back with a cup of tea and enjoy reading this issue of *New Nature*. Continually striving to provide you with a great read, we would love to hear your comments, so drop us an email with your thoughts, or if you would like an article featured. We look forward to hearing from you.

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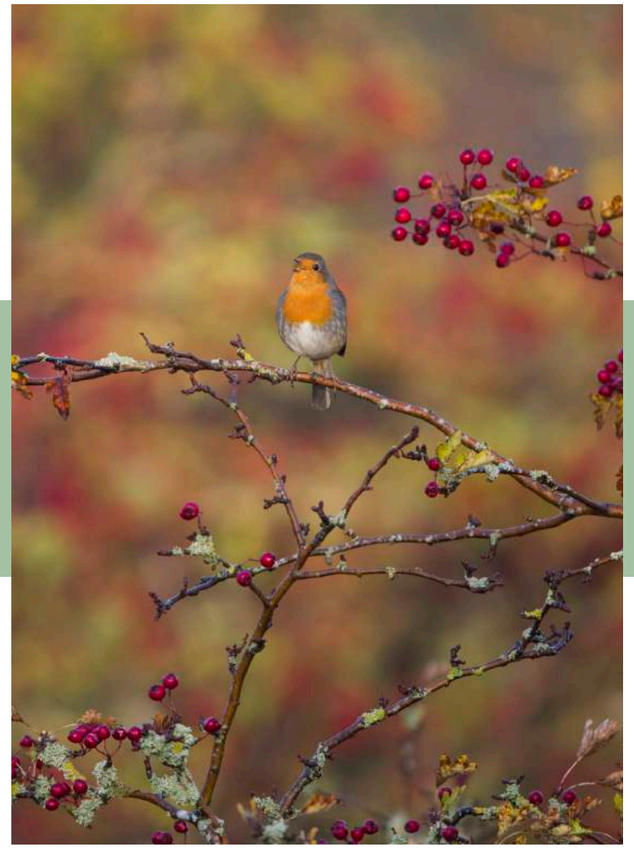
Readers' PHOTOGRAPHS



WANT YOUR PHOTOGRAPHS FEATURED IN THE NEXT ISSUE OF NEW NATURE?

We love seeing your nature pics and hearing the stories behind them so get in touch!

Visit page 5 for details on how to contact us

A beautiful pair of bird photos from the talented **Matt Livesey @m_livesey.** Despite winter coming there's still plenty of scope for amazing shots like these.

What to watch for in NOVEMBER and DECEMBER

Words by Elliot Dowding

November

Despite most wildflowers having died off come late autumn, there is still colour to be found in the hedgerows at this time of year – mostly from fruits. In particular, keep an eye out for the poisonous red berries of the climbing plant black bryony, which seem to glow like Christmas lights draped across the bushes and which persist long after the rest of the plant has died.

The weather in November may not be much good for sunbathing, but this is the perfect time to go beachcombing, especially on western coasts. Storms and weather fronts blowing in from the Atlantic can deposit heaps of interesting flotsam and deep-sea treasures on our beaches. Weather like this can be damaging to sea creatures and coastal wildlife in the short-term, but it can also provide beachcombers with a fascinating snapshot of life in our seas.

If you haven't yet seen a chough, arguably our prettiest and definitely our rarest crow, then this is one of the best times of year to encounter them as the population is high after the breeding season and family groups can be seen swooping around the cliffs and playing in the wind. These red-billed and red-legged crows can be found on the coasts of Cornwall, Wales, the Isle of Man, parts of western Scotland and much of Ireland. Another bird to search for this month that should really get your heart pumping is the great grey shrike. This is a winter visitor from Northern Europe, which arrives on our shores in mid-autumn and is usually found in scrubby, open habitats such as heathland, moors, downland or wild areas of the coast.

Image: Great grey shrike, smudge 9000

December

Freezing temperatures this month, particularly in the north of the country, can push otters to the coast where there is less threat of their hunting grounds icing over. Visit an estuary or rocky shores in sheltered bays to have a chance of coming across this charismatic mammal rummaging through seaweed or fishing in the sea.

Several bird species congregate in large roosts at this time of year and this can make quite a spectacle as they gather at dusk. One such bird is the reed bunting; outside of the breeding season they can be much more widespread than their name suggests and can be found feeding across the countryside or even in gardens. In mid-afternoon, stake out a patch of reedbed (even a small one may do) or thick scrub on a heath and watch as buntings appear from all points of the compass to drop into the vegetation – roosts can number several hundred or more.

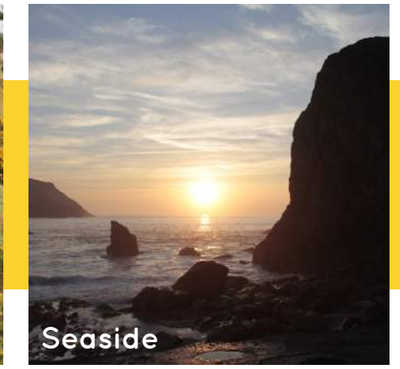
There are a number of birds that arrive in Britain to winter, from geese to thrushes and waders. Amongst these is a colourfully patterned finch called the brambling, which can occur in flocks scattered about the countryside. They often associate with their close relative the chaffinch, feeding in stubble fields or in woodland where they seek out beech mast amongst the leaf litter. They vary in numbers each year and in different parts of the country, but their stripy heads, white rumps and orangey-pink colouration makes them well worth seeking out.

PLACES TO VISIT

No need for the winter blues when you're in DEVON


Gorse


Dartmoor Pony


Seaside

Who says that winter is bleak and lifeless? There are still so many wondrous sights to behold in the depths of the coldest season. This month, I went around our beautiful county of Devon in order to highlight the natural wonders that are still out there to enjoy.

We're lucky in Devon. It is the only county with two separate coastlines, estuaries and moorland all in one. Astonishingly, 40% of the world's population of grey seals come to British shores to give birth. In November, bull seals have claimed the best beaches and soon after females will arrive. Beaches, like that of Peartree Point, are usually crammed with noisy creamy-coloured pups by the end of November. Keep a look out for curious heads bobbing up and down the shoreline.

Up on Dartmoor, flashes of colour speed past as kingfishers dive into the icy water to retrieve fish swimming below. With the lack of foliage on the trees, this time of year is brilliant to go birdwatching. Usually elusive birds can often be seen on bare branches and tree trunks, giving you the opportunity to learn their calls. In the forests the trees are green in a different way as they are smothered in moss and lichen – now is a great time to inspect these closely with a hand lens.

One of my favourite wild spots in Devon is on the Sharpham Estate, which lies alongside the River Dart as it winds its way down to the sea. Starling murmurations are plentiful amongst the reedbeds. Nothing compares to the whooshing sound overhead as hundreds of starlings beat their wings in unison, tightly circling metres above you. Down this stretch of the river, you might even get a glimpse of a playful European otter! Check for tracks or slipways made by the bellies of these sliding mammals on muddy or sandy banks. Spraints found on boulders or under bridges, and fish scales and bones nearby are a tell-tale sign of otter presence.

Arctic waders, such as curlew, black-tailed godwit and ringed plover, flock to the Exe Estuary in the winter to feed in the bountiful waters. Make sure to time your wader-spotting visit an hour before high tide to observe them feeding at close range before flying in a mass swirl of feathers to the next feeding site. Keep an eye out for predators lurking nearby, such as peregrine falcons and red foxes, who are ready to snatch unsuspecting waders. Listen out in particular for female foxes courting cries, which echo through the cold night air on the Exeter University campus.

Though the land may be frost-bitten, there is plenty of nature out there to spot. Be patient, wrap up warm and let the winter wonders come to you!

Words by Bryony James

Images: Gorse and Seaside, James Irwin; Dartmoor Pony, Bryony James

Species Focus

GREAT CORMORANTS

Phalacrocorax carbo

Words by Scott Thomson

The cormorant – a bird recognisable to most and found almost everywhere from rivers to the open sea. Their perceived 'commonness' hides much of the wonder of these birds. Even their Latin name *Phalacrocorax carbo* - literally 'bald dark raven' - is a rather underwhelming description of a magnificent species.

Great cormorants are found in every continent aside from South America and the Antarctic and receive little attention aside from their unusual habit of standing upright with their wings apart. Cormorants have what is known as 'wettable' outer feathers. This means that their outer feathers have a microporous layer which allows water to soak in. The additional weight acts similarly to a weight belt in human divers, allowing the birds to dive more easily as their outer feathers don't trap air. This helps them to sink more quickly and chase their underwater prey, which can be anything from eels to flatfish. This is also why the cormorant appears to sit so low in the water when it swims. Though fairly large for a diving bird, a cormorant can reach a depth of about 50 metres and remain submerged for around a minute, which is a very impressive feat.

Once out of the water the cormorant is a rather clumsy creature. Their large feet are ideal for swimming, but are poor on land meaning it is not unusual for cormorants to stumble and slip on seashore rocks. Their wet wings add to their troubles as the water drips off giving them an altogether weary, bedraggled quality.

As cormorants usually live in cold water areas, their inner feathers, the ones touching their skin, remain water repellent. This means they retain a warm layer of air close to their skin, which allows them to survive harsh conditions despite spending most of their lives with cold, wet feathers. This adaptation is shared with a bird called the *Anhinga*, which is a similar species found in South America. As the *Anhinga* lives in warm waters, it doesn't have water resistant insulating feathers and is literally 'soaked to the skin' each time it dives for food.

If you watch a cormorant once it has made its way up the shore, you will see something special. They spread their wings out wide to let them dry and as they do so you will start to notice the intricate details of these birds. Though dark feathered they have an emerald sheen to their plumage that is almost iridescent in the sunlight. As they dry, you see the white throat growing brighter, contrasting against their dark feathers. If you are lucky enough to see them in the breeding season you can witness what is probably the most impressive nest building of any seabird. They build large, intricate nests on cliffs and rocky outcrops. These nests can often span a metre and the cormorants are fastidiously tidy, always moving bits of twigs to make things just right. Sadly, they also use a lot of manmade products such as fishing nets and marine debris, which they view as 'excellent' nesting material. It's great to see how nature finds a way to make use of such things, but it is always sad seeing a beautiful bird perched on bits of plastic and litter, as this waste can be dangerous to parents and their chicks if they become entangled. Cormorants also cause conflict with fishermen and anglers who view these creatures as greedy birds that are stealing their catch, particularly in artificially stocked lakes.

Despite some problems the UK has a large number of cormorants, about 9,000 in summer and around 40,000 in winter when we play host to the migrant population. As such it is crucial that we maintain the environment for them, everything from not overfishing the seas and rivers to not replacing rocky shores with sea walls is crucial in ensuring that the cormorants continue coming here in large numbers. Despite being commonplace, there is nothing common about these birds and next time you see one, please take a moment to appreciate just how special they are.

Image: Oscar Dewhurst

A SCOTTISH ADVENTURE

Words and images by Camila Quinteros Peñafiel

Assynt

After the chasing of wilderness, remote locations, lighthouses, breathtaking cliffs, places with history, and wildlife exposed to adverse weather, I ended up in Assynt, located in the Highlands of Scotland.

This exploration started when I left Oban quite early one morning, and as always, I unfortunately got car sick. I could not enjoy the landscape by the road as we drove through the Highlands nor the cloudy and rainy Loch Ness, but once in Ullapool I thankfully started to recover.

Stac Pollaidh

We kept driving north and reached the Stac Pollaidh parking area on the shore of Loch Lurgainn in the north-west Highlands. Not as high as a Munro, this relatively low 'Graham' of 612m can be climbed if you take your time and you are relatively fit. It does have easy access from the road and is therefore a popular spot to climb. Scrambling up the ridge, we were blindfolded by the mist, but it gave this place a supernatural feel. By the time we reached the peak, the prize was just being on the top among rocky crests of Torridonian sandstone with many pinnacles, steep gullies, and stunning views of the Atlantic.

Lochinver

Entirely wet after the conquering of Stac Pollaidh, we reached Lochinver, where we spent the night in the bunkhouse. Lochinver was a good place to get some supplies for our final destination.

Stoer

The next morning, we kept driving along the single and twisting track in the middle of the rocky, almost treeless landscape, going five miles to the north. And suddenly, there it was… the crofting township of Stoer, with a few scattered houses and crofts. The rock of this small village is said to give accessible evidence of the Precambrian environment – the earliest part of Earth's history. It also offers a wonderful sandy beach where sometimes you can be the only person present on this south-west facing coastline.

Stoer Head Lighthouse

Less than four miles from the village stands one of Stevenson's lighthouses at 14 metres high, which, including its elevation above sea level, is 54 metres. Built in 1870, its light marks the headland of the Point of Stoer.

Old Man of Stoer

If you keep walking from the lighthouse heading north, there stands an astonishing 60 metre high Torridonian sandstone sea stack. However, it has a very modest and low profile compared to other Scottish sea stacks, such as the Old Man of Hoy in Orkney which is 137 metres. This is a wonderful location for naturalists, birdwatchers, climbers (first climbed in 1966), photographers, botanists, admirers of sea wildlife, and just all nature lovers.

Ben More Assynt

And if you want more Assynt-adventure, keep driving to Inchnadamph where Ben More Assynt can be climbed.

Ardvreck castle

From Inchnadamph we kept driving following the north shore of Loch Assynt to reach the ruins of the 16th century Ardvreck Castle. Built by the Clan MacLeod in 1590, it was destroyed by the Clan MacKenzie in 1672.

Stoer – Patagonia

It is interesting to think that at some point in 1800 shepherds responded to a call from Patagonia who wanted people to go to work in the sheep industry. From different corners of Scotland, just like Stoer, crofters and their dogs submerged into the unknown, looking for better opportunities for their families – from one remote and isolated place to another as they arrived in Patagonia.

Stoer Head Lighthouse

The Grey SEAL

Since late October, bull grey seals have been seeking out beach territories for pupping. These enormous males can weigh 300kg and measure two metres in length. As autumn draws to a close, females assemble at established pupping sites, known as rookeries. Despite only weighing 14kg at birth, the delightful pups develop the blubbery layer required for survival in the freezing sea quickly, thanks to their mother's milk containing 60% fat. Pups only stay on land for 18-21 days, on average, before taking the plunge into the watery blue. The end of November is the optimum time to witness these adorable seal pups playing in the waves. Colonies reach climactic activity in mid-December, with aggressive males making a raucous display, and there can be over 1,000 pups present at some sites.

The grey seal (*Halichoerus grypus*) is the largest of the two British seal species – the other being the common seal (*Phoca vitulina*). You can differentiate between the two as the grey seal is much longer and has a darker colouration than the common seal. It also has a flat, convex head profile, known as a Roman nose.

Timing of births can vary along the coast, starting in September in western Wales, in October in western Scotland, and as late as November on the Farne Islands. One hotspot to view grey seal pups this autumn is South Walney Nature Reserve, Walney Island, Lancashire, which is the main haul out site for grey seals in the north-west of England. Another terrific location is Donna Nook National Nature Reserve, Lincolnshire, where you can get up close and personal to more than 1,000 pups (in a good season), thanks to a viewing area at the foot of the sand dunes. Grey seals can also be viewed along the Norfolk coast year-round, with breeding taking place from late October to the end of January. For me, Norfolk is one of the best places to view these slothful creatures, with two major breeding sites located at the National Trust reserve at Blakeney Point and Horsey beach.

It's important to remember to stay clear of the seals during breeding season – don't worry, many nature reserves provide perfect viewing areas for a glimpse at the adorable pups! Females are incredibly protective of their young during this time, but they are also shy, so will abandon their pups if they are disturbed.

British waters are inhabited by an estimated 12,000 or more individuals, but don't let their current high population fool you. Just like much of our marine life, grey seals are under threat. Since 1970, they have been protected in Britain under the Conservation of Seals Act and they also have protection under the Marine (Scotland) Act of 2010. Despite this protection, marine debris and ghost fishing gear threaten them via ghastly entanglement, often choking and drowning these graceful swimmers. Lizzie Daly and her team have also recently brought to light the conflicts between seals and salmon farmers in Scotland, with *Silent Slaughter: The Shooting of Scotland's Seals.*

Image: Harriet Gardiner

ANNAH RUDD
Hannah is an MSc Marine Environmental Management postgraduate at the University of York. She is an ocean advocate and her love for marine conservation has taken her around the world.
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DEEP PRIMAL

Sophie May Lewis takes us on a journey through an autumnal South Downs

Mist snags on the grey columnar trunks. The wood collects the monochrome moisture as it rolls off the downside, and a mild south-westerly is condensed by a squatting northern air mass. November. The beech hangers of the north slopes of the Downs don't receive the sun until it summons the energy to push up over the totty land and is tracking west. The sun's rays reach the edge of the woodland first, where the treeline is frayed and the slope shallows within reach of tiller and harvester; the boundary of forestry and agriculture. A run of wire, strained neatly against chestnut posts, marks the line of the boundary adding its barbs to that of bramble, blackthorn and briar. Land, however, knows no such distinction and thistle, sapling and bramble stolon regularly cross the divide. A bend in the wire, a treading down, tufts of hair caught on the barbs, a mess of slots in the soft mud; all these mark another crossing. The fallow deer come here, passing through and along the woodland edge as they have for centuries; alternatively prized or poached. Once wolves would have added their paw-pad prints to the stoached ground, tracking the prey animals' passage from woodland shadow to open glade. Now the predators are long gone, half remembered in the instinctual knowledge of the deer, but absent and of little relevance to current generations. Unbothered by predators the herds increase in number with little control, except for the finite resources the countryside can provide to sustain them – early in the year when the woodland is slow to come into leaf, and later when summer drought thins the foliage available. The farmer may curse the deer's presence when the herd enters the fields in search of easier forage in the form of freshly germinated crops. He can blame the Normans – it was their passion for hunting that returned the fallow deer to Britain. Emerging in the half-light of dawn and dusk, it is hard to estimate how many deer this Sussex woodland harbours, but many a forester will tell you their numbers are too high. Winter starvation forces the deer to strip bark from young trees, and in spring the woodland floor has little chance to flower before being browsed low. Other woodlands are managed better; the populations of fallow and other deer are monitored and controlled, the role of the wolf taken by a marksman with a high-powered rifle. Unpalatable, controversial, but one way of maintaining the balance.

For most of the year, the deer go about their business unnoticed; a glimpse of movement between the trees, obscured by dappled hides in dappled sunlight.

In autumn, however, when the mists shroud the woodland margins and frosts trigger the seasonal colour change of the leaves, all that changes. Autumn is the time of the rut. The herd gathers on ancestral 'lekking grounds', the males (bucks) posturing and competing for the attentions of the females (does). The contest occasionally but rarely comes to blows, when locked antlers and pushing strength are used to decide a winner. A show of masculinity and power is usually enough to establish a hierarchy between the bucks. Throughout the month or so of the rut the competitors will hardly eat and barely sleep, or they risk losing their hard won territory. The sound of the rut travels through the woodland, a deep reverberating groan repeated time and again by the males, a call and a declaration uttered day and night for weeks on end. On a chill misty morning the groaning bellow of the master buck fills the air with a strange sense of transcending centuries. This is deep primal, wildwood, raw nature, and it stirs the hairs on the back of my neck every time.

A pale buck, his off-white hide stained from the wallow, has dominated the rut this year. His throat bulges, wide eyes rolling with maddened glares as he responds to the younger self-confident males. Now he is almost spent, his energy ebbing away as testosterone levels fall. It is time to separate himself from the herd again and turn his attention to what remains of the woodland's bountiful harvest, gleaning all he can to rebuild his fat reserves ahead of the cold weather forecast. Beech-mast and acorns, fungi and lichens, and the first tender shoots of the autumn-sown cereal crops in the fields. The sharpening frosts wither more tender vegetation; seed-heads are battered down by squalls. An older weaker male might not see out the winter, but this buck is in his prime, the breadth of his palmate antlers and the depth of his muscular neck promise more successful rutting seasons to come.

Blackbirds and redwings are stripping the berries from the holly – there'll be none left by Christmas. Winter reduces our time to explore outdoors; the woods become less inviting, perhaps best left to the deer and birds. Dark days of December make for condensed nature, concentrated moments picked out in high definition. The robin's song that pierces the streetlamp light on the walk home from the pub. The reflective eyes of a fox caught in the headlights of the car. The flurry of a mixed flock of tits roving along the hedgerow; elastic and buoyant, unceasingly active, gone as suddenly as they arrived. The setting winter sun, cradled by the laced branches of the trees.

SOPHIE MAY LEWIS

Based in rural West Sussex, Sophie finds inspiration for her writing and photography in the South Downs and the Weald. Introduced to wildlife and landscape history through family walks as a child, she has been hooked ever since.

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UNDERRATED SPECIES

Unarmed Stick Insects

Acanthoxyla inermis

Words by Alex Pearce

From Japanese knotweed to Pacific oysters, naturalists often focus on invasive, introduced and alien species, bemoaning the problems they cause to our native wildlife and denouncing the Romans or those pesky Victorians for bringing exotic wildlife to our shores to wreak havoc.

But occasionally, an introduced species slips through the condemnation net, appearing to have little or no effect on our environment. In the south-west of Britain, there is one such species which has been living here for a century with no known consequences. Difficult to spot and able to breed without mating, the unarmed stick insect (*Acanthoxyla inermis)* was brought to our shores from New Zealand in the early part of the 20th century. One of four stick insects now found naturalised in the UK, the unarmed stick insect is the most common happily surviving in our environment.

The strongest colonies are found in the temperate conditions of Cornwall; however they are slowly spreading and have been recorded in Devon, Dorset and South West Ireland. It is believed they arrived here with imported plants, first introduced via a garden centre called Treseders in St Austell. Treseders were the first nursery to import Australasian plants during the Victorian times and supplied gardens in Ireland, indicating why the species have colonised in certain locations. Botanists first recorded the unarmed stick insects on plants at the nursery during the 1920's, although it is possible they had already settled well before then.

Heralded as the longest insect currently in the UK, unarmed stick insects can grow up to 125mm, although they tend to average around 100mm. The body is smooth with some bumps along the back and although the colour can vary from bright green through to dark brown-black as well as red tones, muted green shades tend to be more common. But, despite their potentially rainbow palette, you will need to have a keen sense of sight to spot them; stick insects are notoriously famous for their camouflage techniques. As the name suggests, they naturally resemble sticks or twigs and are masterminds at choosing the right kind of plants to disguise themselves in, such as laurel.

Stick insects are able to practice parthenogenesis; the act of producing young without fertilisation from a male. Females will lay hundreds of eggs during summer and early autumn, dropping them into the soil near feeding grounds. The juveniles will hatch in the spring and can be up to 12mm long at birth. They will automatically climb the first stem they see, so it is vital they are born near a food source. During the first few months of growth, they can shed their skins up to six times before finally becoming mature in mid-summer. As they are born near a food source such as bramble or privet and have no need to find a mate, stick insects tend not to move very far until the autumn, when food becomes scarcer and they need to locate nourishment or warmth. During these chillier periods, the bugs will bask out in the sunshine in order to help them regulate their body temperature. During winter when the temperature plummets, many do not survive, however a few can battle through until the following year, helping the numbers increase.

Whilst on the whole, introducing species is an unacceptable practice which has led to the extinction of many natives, the unarmed stick insect appears to have no real impact on other flora or fauna yet. In fact, their presence in our environment could actually be seen as a positive as they will provide a food source for birds and small mammals in the area. But, the fact they can breed without sexual interaction means that a single egg can produce an entire colony, so they could be a risk. If local temperatures allow them to continue to move northwards, the full impact of this seemingly harmless and fascinating creature could still be revealed.

A Yorkshire jewel

NOSTERFIELD

ZACH HAYNES SHARES HIS LOVE FOR THE BEAUTIFUL NOSTERFIELD

I've been to lots of nature reserves. I spent one year going to as many Yorkshire Wildlife Trust ones as I could – I managed about 60. I saw some amazing places, places that I will go back to, but Nosterfield Nature Reserve that I go to often is run by a charity called the Lower Ure Conservation Trust (LUCT). The area is pretty special. Next door to the reserve lies the Neolithic complex of three henges called the Thornborough Henges. This place has been special to people for millennia!

Nosterfield sits between two rivers, the Ure and the Swale and the area is called the Ure-Swale Washlands. As the ice melted at the end of the last ice age, large amounts of sand and gravel were deposited in the washland area. This place is now agricultural land mainly used for growing crops.

Recent history saw parts of the area quarried for the sand and gravel deposits and that was the start of the nature reserve's story. A group of local people saw the potential of the area for wildlife and that the former quarry sites could be used to create new habitats that would be very beneficial to different species.

LUCT was formed in 1997 and started work on taking over a former quarry at Nosterfield and creating new habitats. By the early 2000's LUCT was caring for 150 acres, managing it as lakes and wet grassland. Some of the ponds have been planted by this charity to form reedbeds as well. The wet grassland is important for waders and Nosterfield helps birds that have been in decline such as curlew, lapwing and redshank, all of which now breed on the site. The site has had other successes, too. In 2008 it was the first place in North Yorkshire to have breeding avocets, and in 2010 the reedbed work paid off and the first bitterns to be heard booming in North Yorkshire were heard at Nosterfield.

It's not just the birds however, as the site has a huge breadth of species. One of my favourites is the bloody-nosed beetle and Nosterfield is the only site in Yorkshire you'll find it. It's also great for plants, butterflies, moths and dragonflies as well.

Recently the reserve was part of Chris Packham's bioblitz, and I was lucky enough to be involved with this as a young presenter. On the day, the place was packed with lots of expert naturalists checking out every corner of the reserve. It was an amazing day, and the overall total was an incredible 1,111 species! Not bad for a former quarry and the second highest total from the 50 reserves that were part of the Bioblitz. I learnt some new things that day, too.

LUCT have been so successful in managing the place that they have been offered another 100 acres to look after. I also discovered they were awarded some Postcode Lottery funding in 2017 to start a very interesting project, as well as receiving more funding this year from the Heritage Lottery Fund and the Local Nature Partnership. So, what is it? Well, as the area is so special and has a long history a lot of studies have been done about what the area would have been like at the time the Henges were created. There were a lot more wetlands about and the plant species that grew there have been discovered from core samples. Nosterfield has a plant nursery, with wet beds and a new polytunnel, growing the plants that existed on the site at the time the Henges were built to recreate these former habitats. I saw volunteers growing great fen sedge which grows 8-10 feet tall! It's possible that habitat could be used by breeding cranes, and with all the successes so far I wouldn't bet against it.

I love Nosterfield and I've had some lovely experiences there. All the people that run it and volunteer there have been really supportive and encouraging to me and I'm really glad that 21 years ago they decided to take on this incredible project. It really goes to show that with determination and effort we can make spaces really wild again.

FIND OUT MORE AT WWW.LUCT.ORG.UK

Images: Beetle and Bee Orchid, Zach Haynes; Aeriel Photo, Lower Ure Conservation Trust

GILLIAN BURKE

New Nature's Alice Johnson speaks to the TV presenter and ocean lover Gillian Burke about natural history filmmaking, career advice and memorable wildlife encounters

Known as the 'roving reporter' for BBC *Springwatch*, this year Gillian Burke has conveyed wildlife spectacles to our sitting rooms, such as otters on the glorious coasts of Shetland and wildlife-studded reserves in Yorkshire. Although new to the presenting scene, she has a wealth of experience in broadcasting, having worked on different programmes for Animal Planet and the Discovery Channel in various roles from researcher to producer. Her enthusiasm for all wildlife shines through on screen, and I caught up with her to discuss natural history filmmaking, her love for our oceans, as well as her time on the 'Watches'.

A childhood fascination

For many of us a love of wildlife starts at a young age, and for Gillian this was no different. Asking when she first became interested in wildlife, she commented: "It simply just happened. I lived in Kenya until I was 10 years old. I was actually born in the city, but I had the opportunity to go camping as my Dad was dedicated to taking my brother and me out of Nairobi, so we saw, as he called it, the 'wonders of Africa'. I did have the opportunity to see a lot of the animals you think of when people mention Kenya – elephants, rhinos and giraffe. That was an amazing thing to grow up with, but actually what I think made more of an impact was the everyday encounters. What I really appreciate was that I had a lot of time on my hands, but not much else in the sense that I grew up pre-devices and pre-internet – I'm one of the last generations to come through with that experience."

Often going out and spending the day exploring during the school holidays, Gillian described how she became fascinated with all creatures: "I would push against the trails of termites, those sort of mud tunnels, and break open a few of them to see what was underneath – then I would watch soldiers come out and fix the tunnels again. I really appreciate having had time and space, not necessarily to see the big dramatic animals, but just to explore things at a child's pace."

Championing species

Clearly passionate about insects, arachnids and the perhaps less 'cool' species of wildlife, Gillian told me why she has always been fascinated by these creatures: "Maybe it is because it is easy to come across them – they are everywhere, so you can have an amazing experience observing animal behaviour in your own home. The house spider is a real favourite of mine – every home has one!"

Lots of people don't consider smaller creatures very interesting, and Gillian shared with me her experiences of trying to encourage others to love these species. "I am really surprised how hard it is to convince other people these creatures are fascinating. I think children are brilliant as they are so open-minded. What works for me, is I get kids to give me five minutes, and they watch my reaction. I don't freak out, so they listen and consider that this creature isn't scary or dangerous."

Natural history filmmaking

Gillian has been involved with a variety of natural history filmmaking projects, and discussing how she first got into this industry she shared with us her journey. "The story really begins from my early childhood as my Mum worked for the UN Environmental Programme and she would take me to work with her. I would sit in her office and look at posters on the wall about various campaigns, so I became aware that things were not always well in the world. I think that was kind of an awakening for me – being concerned about our planet, thinking it was beautiful and realising it was threatened."

Despite her early fascination Gillian explained how as a teenager she became partly disengaged with the natural world: "When I left Kenya I moved to Vienna, which is another beautiful part of the world but incredibly different. I think like a lot of teenagers, I disconnected from the natural world, partly because of the environment change – I didn't recognise the bird life, the animals or the trees. But after I finished school, I decided to do biology. I had this image of me bumbling around in a land rover in Kenya, so I thought I'd do biology, go back to Kenya and work for the

Wildlife Service. I just had this sense that I wanted to be in a place with wide open space around me. If I'm honest, there wasn't much of a plan.

"I came to Bristol because it had a good biology department. As I went to lectures I would walk past the BBC Natural History Unit and after a while I realised that's where the David Attenborough films were made. After doing my degree, I did a variety of different jobs that were not where I wanted to be. Eventually, I went back to Bristol, gained lots of work experience in different production companies and then I got my first gig as a researcher on a series called *Living Europe*. It was an amazing experience as it was with the same team that had produced the Attenborough series *The Trials of Life*. It was a great start, I just loved it and kept going from there. I worked behind the camera for a long time and never really considered doing on screen work because I really enjoyed being involved with production."

BBC *Springwatch*

I couldn't interview Gillian without talking about her time so far on the popular BBC programme *Springwatch*, where she presents wildlife spectacles from across the country to the watching public at home. Asking her if she has any favourite moments from being on the show so far, Gillian exclaimed: "Certainly a highlight was the ladybird spider – I was completely overwhelmed, that was definitely a favourite moment."

Discussing working on the programme, Gillian told me about her transition into her role in front of the cameras: "I never really considered working on screen, but when the opportunity to present on the 'Watches' came up, I couldn't say no. It is the only place really that at the moment has that ability to cover hard-hitting conservation plus nitty gritty behaviour, as well as delving into the science. Let's talk about how the natural world affects people's mental health and wellbeing; let's talk about art. It is the only place that I can see where you can discuss all that."

Career advice

The dream of many young nature lovers is to one day be a wildlife TV presenter, so I asked Gillian for advice for those wanting to enter into this industry. She commented: "It is interesting because I think filmmaking is a very different place now, things have altered very quickly. What has changed is the number of different platforms there are to get your material out there, and that one person can do every aspect of making the film. What makes it difficult is that because everyone can do that, you have to make yourself heard. The advice I would give is to just be as authentic as possible."

Ocean advocate

A lover of the world's oceans and their wildlife, Gillian, like many of us, is taking steps to reduce her plastic footprint. Discussing the problem of plastic pollution in our seas, she had some great advice for people trying to make a difference. She said: "I think it is brilliant that plastic pollution has finally bubbled to the surface. It has become mainstream in the press and people are waking up globally to the issue – I think that is really important. What I would say is that we need to look at our own lifestyles and I'm in the process of doing this myself.

"With plastic pollution specifically there are changes that make a real difference, such as using reusable bottles. It is also about putting pressure on manufacturers. For example, I buy a particular brand of vitamins and at the moment this product is in a plastic tub with a plastic scoop. I have written to the company saying their customer base is already very 'green', people who want to live a healthier life in a healthier world, so why don't they just supply refill sachets? Then you would only have to buy one plastic tub and one plastic scoop and never have to buy that again, as we know it is going to last forever! Things like that you can make a difference with, and I think if manufactures know consumers want a change, they will respond. How we spend our money is probably our loudest voice."

As a qualified PADI-Advanced diver Gillian has seen glorious underwater wonders across the world, but discussing UK coastlines she shared with me the beauty of snorkelling here. "My favourite thing to do is to head down to the coastline, whenever I have a moment, and in late summer I'll take my mask and snorkel, sometimes I even ditch the fins, and I'll head out to a reef. I have no real agenda; I don't expect to see any wildlife in particular. I enjoy diving down and watching the way the light reflects underwater, the motion of the water on kelp beds, and just the sensation of being underwater, weightless and watching the light and the colours. That is my favourite thing to do."

Future projects

Along with her TV appearances Gillian is also keen to support conservation projects closer to home. She explained: "I'm currently helping with the Wildlife Trusts' My Wild Life campaign, and I'm also working with the Cornwall Seal Group Research Trust. They have recently unveiled an amazing articulated skeleton of a male seal, they had been tracking. About five years ago he was sadly found dead, and the charity decided to get his body off the beach and bury the carcass. They knew exactly what they were doing – they wanted to preserve the skeleton, so needed to let the carcass decompose naturally. The end result is that this year they have finally had the skeleton mounted. The seal was called Septimus, as he had a white mark on his septum, and they are taking him on the road. As the skeleton was put together, they started to chart all of his injuries and traumas (he was shot at!) and realised that in being able to have this physical experience for people to look at, feel and touch, audiences would connect to some of the threats that wild seals and other marine life encounter. That's a campaign that I'm helping to support. There is a balance to be had between doing TV work and getting my feet on the ground, too."

You can follow Gillian on Twitter and Instagram @gillians_voice

"I enjoy diving down and watching the way the light reflects underwater, the motion of the water on kelp beds, and just the sensation of being underwater, weightless and watching the light and the colours."

On the 10th of May this year my parents drove me to Dorset to begin a new 12-week adventure. My destination was the Little Tern Recovery Project, a partnership involving six different organisations. The Crown Estate, Portland Court Leet, Chesil Bank and The Fleet Nature Reserve, Dorset Wildlife Trust and Natural England all provide valuable support, but the RSPB is the one responsible for spearheading the project's implementation.

This little tern colony (the only one in the south-west of England) has received annual monitoring since 1976, but only in 2009 did this project begin in its current form. 100 pairs of little terns were present during the heyday of 1997, but the figure had dropped to 10 pairs by 2008. The project's birth the following year unhappily coincided with a complete lack of breeding effort from the returning birds, but 12 pairs produced nine chicks between them in 2010, with the overall upward trend continuing to this day and thus serving as proof that the project has had the desired effect. Arguably the single biggest step in the right direction began in 2013: most eggs used to chill on the cold pebbles (hatch rate = 23%), but the introduction of artificial sand patches meant that nests became more sheltered, as the wind was unable to penetrate through the bucket outer layer like it could through the gaps between individual stones (hatch rate = 90%). An electric fence surrounds the colony so that foxes and unauthorised humans are kept out, plus anti-perching devices — often just the middle section of a plastic bottle — sit on top of every fence post to discourage predatory birds. One major advantage of this project is that no driving licence is needed or preferred, so non-drivers like me can help out with this conservation scheme.

I stayed in a two-bedroom flat at the northern end of the Isle of Portland, and lived with three colleagues during this time — one was there as Project Assistant, while the rest of us were there as Night Wardens. Local volunteers, sometimes returning for their umpteenth year, were deployed during the day. Nocturnal work (and thus 24-hour protection) didn't begin until the night of the 20th of May, the day after the first egg was found. Before this, we spent some of the day at the hide overlooking the colony, familiarising ourselves with the goings-on. It was during this period that I equalled the season's high count of adult little terns (51), only to get beaten by our boss a few weeks later.

By far the most common threats on the night shifts were foxes. Based on personal observations, at least three were using that part of Chesil Beach during the hours of darkness, but the real number was probably higher. They were detected through a combination of Clulite torches and binoculars, and chased away if they got too close. A barn owl would sometimes appear too, but its ability to fly over the electric fence meant that there was little we could do to scare it off besides keeping the light on it until it had cleared the colony space. After a period of night time working each Night Warden swapped roles with the Project Assistant, doing tasks such as little tern chick provisioning watches alongside the more prominent diurnal predator deterrence and general monitoring. When a very bold kestrel from a Portland breeding pair began hammering the colony, there were fears that there would be no fledglings produced this year. Thankfully, this was addressed by diversionary feeding of frozen domestic chicks elsewhere on the beach and outside its nest, though it still took several little tern chicks despite our efforts.

I went home at the beginning of August, tired but satisfied with my input (48 night shifts plus a few more hours during the day). I can safely tell you this much: if you're ever awarded the privilege of helping to protect Britain's second-rarest breeding seabird — only the roseate tern is rarer — I'm sure you won't regret it.

To find out more about the Dorset Little Tern Recovery Project go to: www.rspb.org.uk/our-work/conservation/projects/little-tern-recovery-project/ www.dorsetwildlifetrust.org.uk/little-tern-project

Project Focus

PROTECTING DORSET'S LITTLE TERNS

Words by Alexandros Adamoulas

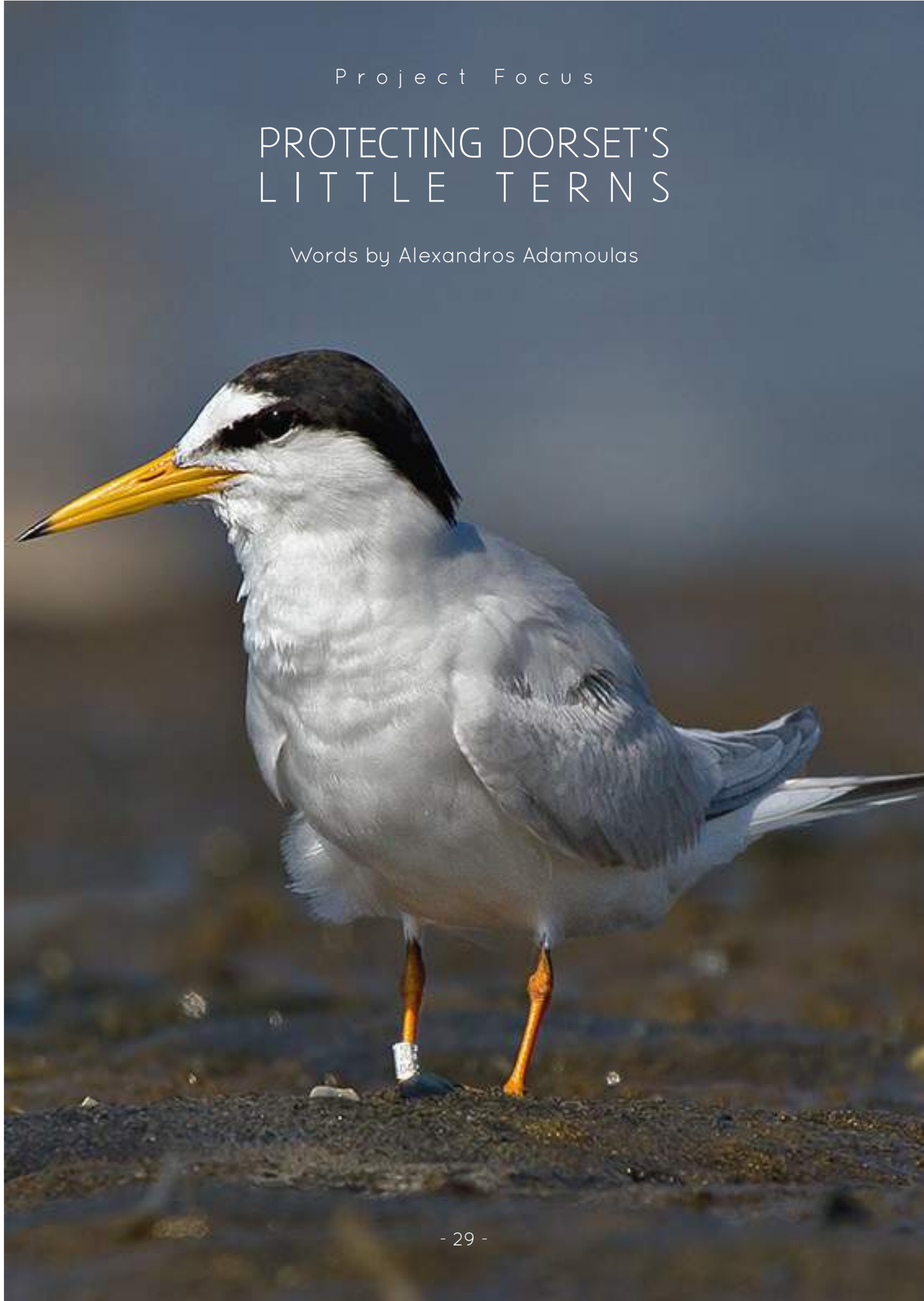


Image: patrickkavanagh

Common lizard
Zootoca vivipara

STUDYING REPTILES

Words and Images by Amber Hopgood

I have always been fascinated by reptiles and amphibians ever since I was a child, but was always fascinated on my own – it is only in the last couple of years that I have been able to do anything with this passion. A large part of fostering this interest was with the Birmingham and Black Country Reptile and Amphibian Group, which I now sit on the committee of, helping to inform where the group focuses its efforts and also managing all the records collected by the group and its volunteers. Through this group, I've been lucky enough to not only come face-to-face with all our local reptile and amphibian species, but also help to contribute to a wider scientific knowledge base through the monitoring programmes.

Aside from this, the main bulk of my current work lies in my undergraduate research project on reptile habitat preference. Since February, I have been conducting fieldwork at my research site – National Trust Kinver Edge and The Rock Houses. Kinver Edge is a 600ha site well known for its picture-perfect panoramic views of the West Midlands from the top of Hill Fort, and for the infamous rock house dwellings found throughout the site, thanks to the presence of large sandstone rock outcrops. The two main habitat types on site are heathland and open woodland, which is perfect for reptiles as it provides space for their thermoregulating, feeding, breeding and hibernating needs. Kinver is home to all four of our local reptile species, making it a regional stronghold for adders (*Vipera berus*), grass snakes (*Natrix helvetica*), common lizards (*Zootoca vivipara*) and slow worms (*Anguis fragilis*). This is an impressive feat in the midlands, as lots of sites have lost many of their reptiles as a result of habitat loss or fragmentation, with particularly concerning declines of adders noted across the region. There are

three main habitat management methods utilised in order to maintain the habitats here: cattle grazing and rotational coppicing on the heathland, and the use of a 'no management' approach in the open woodland. This list now also includes heathland restoration, as a 5ha area was converted from plantation woodland to heathland in 2014.

My research, on a basic level, is assessing how the different management methods used across the heathland and open woodland influence the type of microhabitats that are available to reptiles, and in turn if reptile distribution is determined by this. In order to do this, I have four distinct survey zones (one for each management type) across the site, and have refugia in each of these zones. I opted to use 0.5m^2 sheets of roofing felt for refugia, which has not only kept the project cost-effective and practically feasible, but has also yielded very good results so far, with all the present reptile species using the mats at some point during the project. As often as I can I conduct reptile surveys, where I walk transects through each management zone and check my refugia for reptiles and record the refugia and ground temperature using an Etekcity Lasergrip 800 infrared thermometer. Every month I also complete a more in-depth habitat assessment to measure how the habitats change throughout the year. During these assessments I measure habitat characteristics such as canopy cover; the proportion of heather plants to grass or bare ground in the microhabitat around each refugia; and the distance to the nearest 'cover', which in my research has been defined as scrub or heathland shrub vegetation. I am also using Lascar EL-USB-2 temperature and humidity USB data loggers to record the ambient temperature and humidity of each management zone. With this research, I am hoping to add to the knowledge base of habitat preferences for the four species I am studying, and better understand how different management practices influence reptiles, which is of utmost importance in order to successfully conserve these species.

My project has brought me so much closer to these amazing animals, and let me tell you, there is nothing more exciting than seeing your first adder, hearing a common lizard rustling around in the heather at your feet, or lifting a refugia mat to find a slow worm and marvel at the fact that the animal before you is in fact a legless lizard and not a snake like you might first believe. As a keen photographer I've spent a lot of my time at Kinver Edge taking photos of the animals I have seen, in order to share them with as many people as possible on platforms such as Instagram. It is through these photos that I hope to inspire more people into a love of our native reptiles, so that there are more people around with the passion to conserve them. Research can inform the scientific community, but you need to capture people's hearts if there is any hope of conserving these incredible creatures. In the current climate they need as much help as they can get, and I hope to contribute to their conservation as much as possible.

Male adder
Vipera berus

Neonate slow worm
Anguis fragilis

NEW YEAR – NEW PLANTS?

Discover what BSBI's New Year Plant Hunt is all about

Words by Ellen Goddard

Spotting wildflowers in bloom isn't just for summer days. For the last seven years, more and more plant lovers across Britain and Ireland have been getting involved in BSBI's New Year Plant Hunt. The idea is to head out for up to three hours (of course with some added tea breaks) over the New Year holiday and record all the plant species you can find in flower in your local patch. Last January, around 1,000 people participated, either individually, in family groups or in botanical recording groups, and there were 9,907 individual sightings of flowering plants. People sent in records from Caithness to Guernsey, from Donegal to Norfolk and from West Cork to the Kent coast, with all the lists going up on the interactive map on the BSBI website. This allowed people to see which species were flowering in their area and compare them with the rest of Britain and Ireland.

2018's results showed 532 species were in flower, of which 55% were native species. Daisy was the number one reported species – it has consecutively held the top spot since its joint victory with dandelion in 2015. BSBI's Head of Science Dr Kevin Walker was straight on the analysis, concluding that after the 39% of the records that we would expect to find flowering this time of year, 38% were species that normally flower after midsummer and had managed to carry on flowering, including 'autumn stragglers', such as yarrow, ragwort and hogweed. Only 14% were 'springtime specialists', like primrose and lesser celandine, indicating there was no sign of an early spring. These results show a similar trend to previous years, which started to provide us with a baseline of data suggesting that there can be marked increases in flowering due to unseasonal weather.

As well as the serious plant recording, each year people also compete to record the first flower. In 2018 Irish student Jessica Hamilton nailed it during the first hour of the hunt, tweeting a photo of groundsel by torchlight with the #NewYearPlantHunt hashtag!

For the last hunt, I had the great pleasure of volunteering as part of the support team, helping people submit their lists through the online app and answering those tricky ID problems on Twitter, or passing queries on to BSBI's expert botanists who were on hand to help. Being part of such a great team made the transition into supporting people so enjoyable and rewarding, and I'll be helping out again during the 2019 hunt. Last time we were lucky enough to have coverage from BBC *Countryfile*!

Find out more about how to take part on the BSBI New Year Plant Hunt page: www.bsbi.org/new-year-plant-hunt

Images: Daisy, Dave Steere; Ellen Goddard, Ciara Sugrue

ECONOMIC ENVIRONMENT

Elliott Kelly faces facts and tells us of the social and economic benefits of nature

Returning from Rutland Water, a haven for British birds, the impact of wildlife on our society is evident: Heron Road, Nightingale Way, and the large osprey statue in the middle of a roundabout. Wildlife has certainly made its impression here.

But, what about the wider impacts of nature? We're largely guilty of taking the environment for granted, simply because it has always been there, but could you imagine a world devoid of bird song, of luscious greenery, or worse, the natural protection against floods, pollution, and climate change? It is a difficult image to stomach.

The natural ecosystem has sustained us for millennia, and even in today's global, industrial society, we benefit in a myriad of ways from Mother Nature. One issue that has, until recently, been hidden away under the guise of a minor one, is mental health. The costs of mental health, both direct costs and indirect (such as loss of productivity at work) are estimated to cost the UK around £70 billion per year according to the OECD. That's a glaring issue that cannot be ignored. However, it seems nature provides an unlikely solution, as being in natural environments, surrounded by beautiful wildlife has a drastic impact on our mental health. Our rural landscape has always been an image of tranquillity, and any naturalist or nature lover will tell of the worriless immersion nature offers. In hindsight, these benefits may seem somewhat obvious, but the positive effects on stress, anxiety, and depression are clearly understated in society.

Sometimes, wild areas can have a stigma for being dangerous and unsafe, but with one in six people experiencing mental health issues in any given week, it seems the danger to individuals is no longer the merry men in Sherwood Forest. Maybe, it's time to ditch the four walls of a classroom or office in place of the boundless expanse of the countryside once in a while. Several nature organisations have suggested that NHS England should use 1% of its budget towards developing access to green spaces in order to curb mental health and obesity issues; so far, this has not been implemented, but the evidence suggests this would make a huge improvement.

The environment does not just benefit individuals, but society itself, which benefits from important natural processes. Water quality depends on a healthy environment, and the continued degradation of our upland habitats has meant that water sources are polluted into a muddy brown surge of unclean water. This naturally leads to millions of pounds being pumped into water treatment facilities, and therefore boosting water prices. Another issue is chemical fertilisers that are finding their way into rivers and streams, leading to a process called eutrophication, where algae absorb fertiliser, multiply exponentially, and zap the oxygen out of valuable wetland habitats.

Flooding will continue to worsen too as we remove the natural flood barriers, and again, destroying upland habitats means water isn't trapped upstream. Instead, more of it surges faster down the river. River banks and the surrounding areas are also a natural protection against flooding. Farming and building houses on a huge floodplain in Somerset probably isn't the best long-term idea, but intensive agriculture and increasing human populations have meant that this is the case, with subsequently dire consequences.

But biggest of all is the omnipresent issue of climate change. Peat bogs and woodland habitats are valuable carbon stores, which are being decimated as the government turns a blind eye to imminent rising temperatures. Flash floods, rising sea temperatures and droughts are all likely to ensue as climate change kicks in, all because we insist on exploiting natural resources.

All of these issues, some of the biggest facing our society at present, can at least partially be helped by natural processes. We do not need to rely on huge machinery and expensive engineers to sort out the mess we've already made, simply by encouraging nature to do its job as intended we can prevent these huge costs.

Our water sources would be healthy and clean if we were to reduce the pillaging of our upland habitats, and carbon dioxide emissions would not be so high if we stopped burning peat. The effects of flooding too would be reduced if we stopped interfering with river processes. In some parts of the UK, this is being taken into account as beavers are being reintroduced, which build dams to slow the water down and reduce flood risk.

It seems somewhat difficult or wrong to speak of nature in this way, an economic, utilitarian manner. After all, people enjoy nature because it is spectacular and wonderful. Millions of people each year enjoy being out in the countryside, and there are plenty of people who would say we need to save our species because we have a moral obligation to do so. I wholeheartedly agree with this line of thinking, but those in charge, those who dictate the future of our environment do not think of the beauty of nature. In fact, environmental consequences are pushed aside when deciding on new developments. Housing projects may strip wildlife from an area and destroy a valuable ecosystem, but as long as those houses bring money into the economy, the government doesn't care.

That is why it is important to talk about the social and economic benefits of nature. I could write about how nature inspires us, strikes us with awe, and of our moral obligation to protect wildlife, but the only people who would listen would be those who already agree with me – it would be preaching to the converted. But, if we talk about the money tourism brings in, or the reduced costs for flood damage, then maybe those who do not appreciate the value of nature might start to listen. Maybe action would be taken.

"I'm WILD enough!"

Natalie Sabin tells us about her experience recruiting for a wildlife charity

I've just spent the past year working part-time as a membership recruiter for The Wildlife Trusts whilst studying for my practical conservation diploma. I wasn't a 'chugger' on the streets but worked at pre-booked venues such as garden centres, DIY stores, and independent farm shops. This was with a nice branded stall where I would plonk myself down for the day. My opening conversation question would be, "Are you interested in local wildlife?"

The response that I got every day from at least one bloke over 60 would be, "I'm wild enough!" often accompanied by a self satisfied grin. Variants included, "I've got enough wildlife here," while pointing at an eye-rolling wife, and, "I live a pretty wild life, me." My response on the day depended on what mood I was in. It could be anything from a fake laugh, to a grimace, to asking him how many times he thinks I've heard that one today. When I went to a recruiter meeting I assumed that everyone got this reply, but it appeared that as I'm a young female this charming response was only reserved for me.

I've had countless discussions with otter-hating fisherman, but have managed to sign a few of them up anyway! I've also had a farmer yell at me for a couple of minutes about badgers before calling me small minded and leaving in a huff.

It's not all bad though. I've had countless conversations with some brilliant people who love wildlife as much as me. A bad day could be improved by a member giving me a pep talk, which happened often. The best chats by far were with the kids. An eight year old pointing at my display board and saying, "That's an avocet," was a personal favourite. In contrast to that I often asked the children if they could point at the otter on my board. A shocking amount of parents who were trying to help would point at a stoat and it would be awkward correcting them.

I mostly worked on my own but quite regularly worked at markets and met some lovely people. I often met motherly figures who I would tell my story to, who would then encourage me to pursue my practical conservation career and shower me with support for the day. There is a huge solidarity of people working at markets that made a nine hour day in the freezing cold just about bearable.

I frequently worked at the same venues and did become really friendly with some of the staff. From a manager giving me an extra coat to wear inside the store to someone else buying me some super toasty socks for Christmas to get me over the winter period, and farm park staff taking in a duck I'd picked up that had been hit by a car, there were some morale boosting moments.

I think it is a difficult job doing membership recruitment but you just have to remind yourself what a great cause it is and the nice people do outweigh the rude people by far. As my team leader used to say, "You just have to keep smiling."

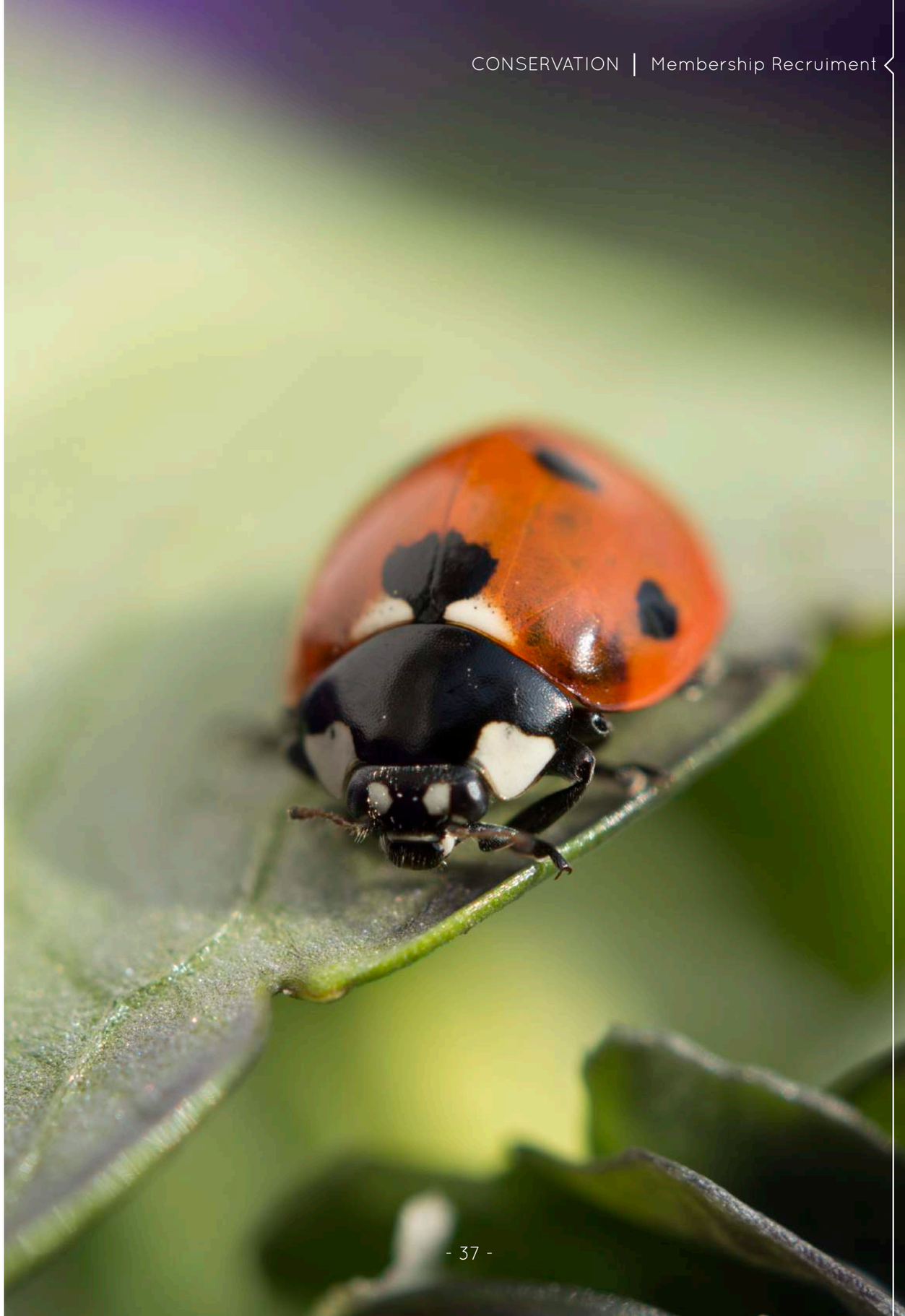


Image: Harriet Gardiner

Cross-leaved heath
Erica tetralix

Lichen and blueberries

Patch of *Sphagnum*

Sundew

A series of dams installed to prevent the flow of water from a major drain on Blawhorn Moss

Boardwalk at Red Moss of Balerno

Treasures from the bog

WHY WE SHOULD ALL BE IN FAVOUR OF CONSERVING PEATLANDS

Words and Images by Rebecca McHugh

Take a trip to Dublin's Archaeology Museum and you'll find yourself in a room full of strange and mysterious items. From Celtic torcs to macabre bog-bodies; artifacts recovered from peat bogs never fail to intrigue and inspire visitors. But while such collections are undoubtedly precious, the environments to which they owe their remarkable preservation are often overlooked as less than awe inspiring.

Peatlands, I admit, are not the most spectacular of landscapes. Compared to rugged mountains and dynamic coastlines, they are frequently dismissed as mundane accumulations of mud and moss. In an attempt to 'make-good' these seemingly unproductive habitats, thousands of acres of UK peatlands were once drained, forested and excavated by landowners hoping to generate profit.

Following the realisation that such practises cause significant peatland degradation, millions of pounds have been spent trying to reverse the damage incurred by these inappropriate management strategies. Much of this money was provided by the European Union and with Britain's departure from the EU fast approaching, I'm sure I'm not the only one concerned about the welfare of peatlands in this country.

But, why bother worrying about the future of peatland conservation? Well, there are in fact many benefits of protecting our bogs. It is only, I believe, with increased awareness of the importance of conserving peatlands that the funds needed to safeguard them will continue to be secured.

The perhaps most obvious reason to conserve peatlands is to protect wildlife. Numerous plant, invertebrate and bird species, many of which are in decline, are reliant on bogs for safe refuge. While peatland conservation is important for wildlife, there are also significant social and economic benefits of investing in our bogs. Healthy peatlands for instance help alleviate local flooding by reducing peak surface runoff after storms. They also provide a natural filtration system that removes pollutants with the potential to affect drinking water supplies, aquaculture and freshwater recreation activities.

Also important is the effect on local communities. Peat drains designed to increase agricultural yields are dangerous for livestock and walkers. By damming these drains and providing new footpaths, conservation schemes provide new opportunities for tourism, recreation and agriculture by allowing safe access to an important part of our rural heritage.

For paleoecologists and archaeologists, peatlands are also an invaluable source of historical insight due to their waterlogged conditions which preserve organic materials. Safeguarding them therefore, is the key to preserving the past.

Perhaps most important though, is the potential of peatlands to mitigate against climate change. In the UK, our peatlands have some of the highest carbon concentrations in Europe. This is important because healthy bogs 'lock down' their carbon, storing it safely in the ground. When peatlands are damaged, conditions become much drier, allowing carbon to oxidise and be emitted to the atmosphere as greenhouse gases. Such is the significance of peatland carbon fluxes that in 2011, the International Union for the Conservation of Nature (IUCN) claimed emissions of just 5% of UK peatland carbon would be roughly equal to annual greenhouse gas emissions produced by the entire UK economy that year! By restoring damaged bogs, peatlands are transformed from emitters of greenhouse gases to terrestrial carbon stores, helping to combat global warming.

The treasures of the bogs go far beyond a few historical artifacts displayed in museums. These are environments with the potential to show how conservation can help not only wildlife, but also wider society. With increased awareness of the wide-ranging advantages of their protection, I hope the future of our peatlands, and other precious habitats, remains secure for the benefit of generations to come.

THE AG BILL:

What, why, how and who the hell knows what is going on?

Words by Georgie Bray

The EU has been the source of agricultural policy through the Common Agricultural Policy (CAP) since 1973. CAP gave much needed financial support for farmers and landowners to produce food for the public, and without it, many of our faithful food producers would go bust.

However, it has been underlined by Wildlife and Countryside Link that CAP funding has also been the biggest driver of biodiversity decline across the UK, as subsidies promoted practices that degraded habitat, soil and water quality. ***Countryside Stewardship Scheme*** funding is available to restore the environment, but uptake of this scheme is poor and unnecessarily complicated, limiting potential overall benefits.

To this point in the article, I have nearly managed to avoid the B-word, but there is no getting around the fact that Brexit is of fundamental importance to our country, and that's not just regarding the economy and our borders. Brexit means that agriculture is about to undergo one huge upheaval. With a reform in UK policy comes the golden opportunity to reform CAP, balanced on a knife edge.

The Ag Bill is a document that will authorise new expenditure for agricultural and land management purposes, allowing the government future powers to modify current EU legislation. It has been dubbed as the first comprehensive agricultural bill for five decades by the Defra Sec of State himself, and that is no exaggeration. These powers will affect how land is managed in the UK across the board, from rural development payments right down to standards of carcasses and agricultural products. Of most interest to me, is the part of the bill that discusses the future of Environmental Land Management schemes, that could improve habitats, soil and water quality in the UK for many years to come, making the fairy-tale of us being the first generation to improve the environment for the future a reality.

In England, the first reading of the Ag Bill was released in September and circulated amongst MPs before debating potential amendments. In December it will undergo a final reading before moving on to the House of Lords. Already, the bill has reassuringly undergone much consultation, including a ***command*** paper, which proposed a direction of future agricultural funding. Public opinion on this paper is what guided the contents in the Ag Bill. To complicate things slightly there are also slightly different things going on in the different countries within the UK, but here I have focussed on the Ag Bill in England.

The Ag Bill currently focuses on public payments for ***public goods***, which means the public are getting services that will benefit them for their taxes paid. This is refreshing after many years of ***direct payments*** that are scaled dependent upon the sheer acreage of a farm.

One point of the bill which has had people up in arms is that food has not been defined as a public good, which may seem odd as we all need food to survive. However, reasoning behind this is logical. The current market value for farming produce is poor and so many farm businesses are held up by these subsidies. Despite this, money for agricultural productivity should be dealt with by the market buying the food - hence public goods focus on services not paid for by a market.

Excitingly for me, the paper also puts forward the idea that a future environmental land management scheme would be the "centrepiece of the Government's new approach to farm payments," which could really raise the baseline of management of the UK's land to improve habitat for wildlife, and the sustainability of UK farming.

Currently, the vast majority of stakeholders in UK land management are trying to make sure that future policy benefits their interests. That includes interest groups of biodiversity, the food market, technology and education amongst others. As you can imagine, these stakeholders fill a very big pot with big ideas for what the Ag Bill should include.

Within government, there is a medley of power tiers working on this part of Brexit that I won't get drawn into talking about. Outside of government however, the main stakeholders that I have noticed putting their opinions forward are the National Farmers Union (NFU), the Nature Friendly Farming Network (NFFN), a few other farmer-led organisations, and then conservation NGOs. To keep updated on what is going on, it's worth following a few of these groups to gauge all points of view on the bill.

So, what can we do now? Although the debate has completed its second reading there are still opportunities for influence. The bill was well supported, but many MPs still felt there was room to improve, and there is still a huge scope for change. As the bill stands, it is a hot potato between conflicting interests including those outside of the currently defined public goods. If you haven't done so already, it is worth keeping well informed, to put your views forward of what you want out of future policy.

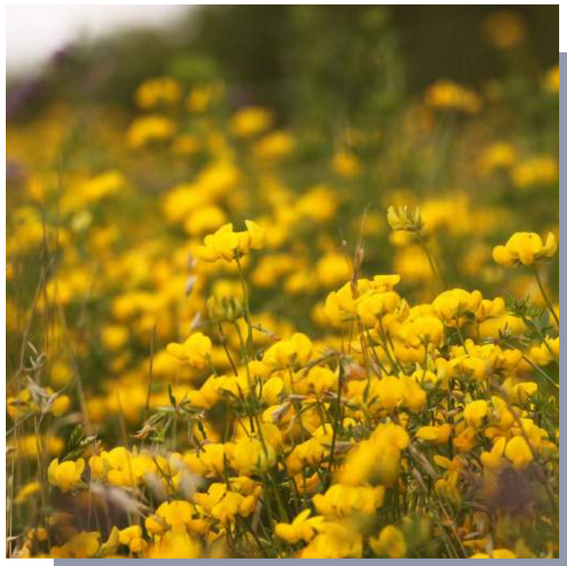
Extra information:

Countryside Stewardship: the current funding provided by the EU that gives financial support to landowners, to manage land for environmental improvements. Payments are based on costs foregone in terms of potential sale of harvested crops and costs incurred in terms of management practices. These improvements can benefit wildlife, water quality, soil quality, flood risk management, woodland creation, preservation of historical features in the landscape, and increase educational public access to the countryside.

A ***Command*** paper was released in the spring of this year, entitled *Health and harmony: the future for food, farming and the environment in a Green Brexit*. The paper proposed to base future policy on a principle of public money for public goods, a means of improving investment into Countryside Stewardship, and phasing out direct payments increase with the acreage of a farm.

Public goods have been defined as enhancements to the environment, public access, land and water management, natural heritage, livestock welfare, plant health, and how we deal with climate change and environmental hazards.

Direct Payments: funding received by European Union farmers on the condition that they respect basic rules on human and animal health and welfare, plant health, and the environment. These payments form a safety net that keep many agricultural businesses afloat that are otherwise highly susceptible to the volatile markets and weather conditions that ensure a profit is made. Payment is also granted to farmers based on the number of hectares farmed.



JEFF KNOTT

Jeff has worked in conservation for a number of years, focusing on policy and birds of prey, and is now the RSPB's Regional Director for Eastern England. *New Nature* caught up with him to discuss the inspiring projects he has worked on, as well as his favourite wildlife watching spots.

You have worked for the RSPB for many years now. What was your first role with the organisation and what did this involve?

My first job at RSPB was as a Policy Officer, working on birds of prey. I was doing data entry work at the British Trust for Ornithology and got a tip off from someone I used to volunteer for that I should consider applying. I put in a very speculative application and got lucky. Being pitched straight into the world of birds of prey as a (relatively) fresh faced graduate was certainly an eye opener, but the opportunity to get straight into the nitty gritty of how to end illegal persecution was amazing and from the off I was working with everyone from investigations to media teams to help support their work.

Can you tell us a bit about how you were involved in helping to conserve hen harriers across areas of England and Scotland?

My role was to help bring together different bits of work to help hen harriers and ensure they had the greatest impact with decision makers. What that actually involved was hugely varied, from representing conservation interests on Government groups, to dressing in a superhero costume to help raise awareness. For me the three key elements to help save hen harriers are direct protection from illegal killing, working with progressive landowners and shooters, and raising public awareness of the birds' plight. I've been lucky enough to be involved in all three at different times.

What would you say are the main threats facing birds of prey across the UK?

Many species of birds of prey have recovered spectacularly over the last few decades. When I first got into wildlife in East Kent, I had to travel to Wales to see my first red kite. Now I see them over my Cambridgeshire garden on a near daily basis. Buzzards are back breeding in every UK county, too. It's important to recognise that great progress. For those that are still struggling, undoubtedly the major threat is illegal killing, particularly on land managed for intensive 'driven' grouse shooting.

Did you always know that you wanted to work in policy, aiming at changing the way wildlife is protected, or did your interest in this develop with your career?

I was lucky and basically fell into a policy job. I decided pretty early on through volunteering that I wasn't cut out to be a warden – at least not in winter – and from there I just wanted to find a job where I could contribute to saving nature.

What does your role now as Regional Director for Eastern England involve?

Working with a fantastic team to deliver the RSPB's mission for wildlife and people across seven counties, from the Thames to the Humber and from Luton to Lowestoft. It's an amazing patch covering some flagship reserves and truly mind boggling projects. The job certainly isn't an easy one, but it's incredibly rewarding.

Can you tell us about an RSPB conservation project that is going on in this area?

There's loads! But if I have to pick just one, it's hard to ignore the Wallasea Island Wild Coast Project. This is a truly (and literally!) ground breaking conservation and engineering scheme on a breath taking scale – the largest project of its type in Europe. The island has been transformed into a wildlife rich landscape of marsh, lagoons, ditches and sea. More than 3 million tonnes of earth was brought in from the tunnels and shafts created by the Crossrail scheme in London and used to create 115ha of intertidal saltmarsh, islands and mudflats. It is true landscape scale conservation and a vast undertaking that will bear fruit for generations to come.

How do you think people can be encouraged to connect with and value nature?

There's no one answer to that, but for me the way to get people to value nature is to get them to connect with it first-hand. Genuine connections come from passion and enthusiasm. I don't know about anyone else, but I can only be passionate about something I've seen, touched, heard, smelt or tasted. If there's one lesson for those of us already addicted to the magic of wildlife, it's to be less worried about how people engage, as long as they do. If someone loves feeding the ducks in their local pond, we should celebrate that. I've got photos of me feeding the geese at Slimbridge as a three year old. Did that put me on the path to being a conservationist? Maybe not in itself, but it certainly didn't do any harm. A colleague once said we have to make nature as popular as sport and as politically relevant as health. I reckon if we can do that, we'll go a long way to saving it.

What advice do you have for young naturalists hoping to pursue a similar career to you?

Get yourselves out there and get known. With the advent of social media and blogs, the opportunities are greater than ever and there are numerous examples of young naturalists who have become really well known while still at school. I only got my first job at RSPB because someone I used to volunteer for while on the RSPB's Phoenix Forum (if you're 13-18 and you don't know what that is, look it up – it's a brilliant group to get involved in) told me I should apply. That's a prime example of the value of people knowing who you are. And be authentic. Don't just do things because you see someone else has done it. Do things that seem right to you and in a way that is uniquely you. Don't try and be the next Chris Packham, be the first you!

What would you say is a career highlight or a memorable experience from your time working for the RSPB?

Well it's hard to top being quoted as the RSPB's Love Island expert for a memorable experience! I hope I've got many career highlights still to come, but one thing I am proud of is my role in getting the Convention on Migratory Species to agree a global resolution on poisoning of wildlife. It might sound really techy, but a variety of great projects across the world have flowed from this and it was fascinating to see how much can happen from one apparently small intervention.

Do you have a favourite RSPB reserve?

So many great options to choose from. For a sheer wildlife spectacle, the high tide roost at Snettisham doesn't compare to anything anywhere in the world. For variety, you just can't beat Minsmere, and Frampton in Lincolnshire is an under rated gem, stuffed with wildfowl and rare waders. But, if I'm really honest my personal favourite isn't actually in the east. I spent my 18th birthday as a residential volunteer at Arne in Dorset and I've had a soft spot for it ever since. Sitting on the sand at Shipstall Point you could be anywhere in the Mediterranean and I still take pride in the hedge growth inside the deer fence we built as volunteers back in the day.

You can follow Jeff on Twitter @jazzy_jeff44

PHOTOGRAPHER FOCUS

Mya Bambrick

Discover the story behind these fascinating photographs from this young birder

BITTERN

This magnificent bittern was photographed at RSPB Lakenheath Fen whilst I was at the BTO Birdcamp in May this year. This photo was taken in a hide (although not my favourite way of taking photos due to the fact I can't get down to the birds level). However, it was the best view I've ever had of a bittern. It was very difficult to focus through the reeds, so I made sure I selected the centre focus point and kept the focus between the eye and beak. I also tweaked this photo in lightroom to slightly brighten and sharpen the image.

REDSTART

Redstarts are one of my favourite small birds, but I've never been able to get a good shot of one, as they've always been in the distance or in the shadows. One day in August this year I visited Ashdown Forest, which is a good place to see redstarts. Like quite a few of my photos, this shot wasn't planned and I just happened to see it whilst birding. These birds are often very skittish, so I approached this one very slowly, laying on the floor once I was close enough, but without disturbing it as it was feeding on insects on the path. The photo is not quite as sharp or as in focus enough for me, but I was still glad to get a decent photo of such a stunning bird!

LITTLE EGRET

Birds in flight shots are always quite tricky to take, especially when you don't have a tripod or monopod. I take all of my photos hand-held which can be difficult sometimes as my lens is quite heavy. When photographing birds in flight you should aim to use a fast shutter speed (at least 1/1000). Exposing white birds correctly can also be difficult and one way to avoid the detail being 'blown out' is by setting your exposure compensation to -1.0 to -2.0.

ROBIN

This robin in the snow is probably my favourite photo I've ever taken. Early last year I was at RSPB Pulborough Brooks Nature Reserve and snow started to fall. This shot was pure luck, as when I was walking towards a hide this robin appeared on a fence post in front of me. In my images I like to think about composition all the time including when I'm actually taking the photograph. I decided to position the robin at the bottom of the shot so I could capture the snow falling around it, making it quite a festive photo!

BLACK-HEADED GULL

Early morning and late evening are my favourite times to go out and do some photography. Wildlife is generally more active at these times, and the light is not only less harsh than it is in the daytime, but it can make a simple shot more interesting by giving it a beautiful golden hue. Taken at a local park, I photographed this black-headed gull as the sun went down behind the trees.

When taking photos I always try and look for a different angle to take them from to make the image more interesting and to capture people's attention. This can be hard as I only have one lens which is a 400mm, so photographing relatively small animals like frogs means I need to be at least a few metres away. Generally, I like to get down to the subjects level. I photographed this common frog back in the spring, and instead of taking pictures of all of the frogs, I focused on just one. I purposely took it as a portrait to give the frog space to 'look' into.

COMMON FROG

About the photographer

Mya is an enthusiastic 16 year old amateur wildlife photographer, birder, bird ringer and blogger who has been fascinated by wildlife from a young age. She is based in West Sussex.

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READERS' CORNER

Book review:
Wilding by Isabella Tree

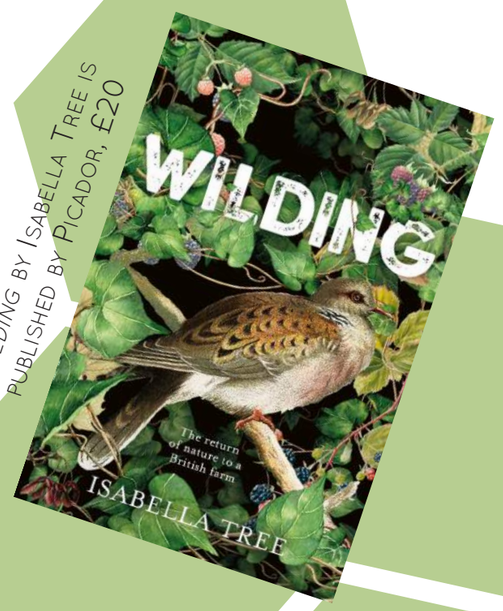
The Knepp Estate in West Sussex is only a 30-minute drive away from where I live, so I have the privilege of being able to visit this fascinating and exciting 'wilding' project fairly regularly. Having seen first hand the wealth of wildlife, including some stunning species like turtle doves, that have returned to the area following the land being taken out of intensive agriculture and the introduction of free-roaming herbivores, I was very interested to read about the inception of this special place in Isabella Tree's book published earlier this year.

It charts the story of the estate from when her husband, Charlie Burrell, inherited it as a fairly typical lowland farm that was straining to make measly or zero profits. It follows the tale of their inspiration from ecologist Franz Vera and the Oostvaardersplassen – a rewilding project in the Netherlands – that contributed to making it the incredibly biodiverse place that it is today.

Perhaps what stuck most in my mind after reading this book, was not just how many obstacles they faced to get the project underway in the first place, but more specifically the description of the sometimes furious opposition to the project from some local farmers and residents. It was genuinely distressing to me to read of how deeply many of us have become separated from nature – even amongst those who live in and manage our countryside.

There are lows, but there are also highs; the many successes of the project are illustrated with remarkable facts and figures as well as touching observations of the plants and animals that returned to the land – such as the ravens nesting in a tree right outside their house and clouds of painted lady butterflies swarming over the fields. This book gives you a lot to take in, a lot to digest and think about; it challenged me and I hope it challenges others who read it. Be it in the way we perceive our countryside and the place nature has in it, to our consumption of meat, to the state of modern farming and the grim future that seems to be unfolding before our very eyes. This is coloured with a little hope, if we dare to dream big and bold and push against the status quo. Whether you've heard of the Knepp Estate or not, this is a must-read and easily one of the most potent and important nature books in the last few years.

Words by Elliot Dowding



Wilding by Isabella Tree is published by Picador, £20

What's on the blog:
Keep up to date with *New Nature* and news from the natural world by reading our online blog.

A Stranger from the North
Rebecca McHugh

The Arctic visitor who gave a whole new meaning to the phrase 'Where's Wally?'
Last spring, the so-called 'Beast from the East' wasn't the only polar experience reported on by journalists. Repeated sightings of a fully grown, seemingly healthy, male walrus journeying around Scotland also attracted significant media attention. Nicknamed 'Wally' by the press, his surprise arrival came just five years after the last walrus was seen in UK waters – in what was meant to have been a once in a lifetime event.

Welsh Wildlife at its Finest
Asia Roberts-Yalland

This summer when planning our annual holiday, we made the decision to forgo hours spent at airports and ever changing exchange rates, instead opting for a 'staycation'. Initially I thought staying in the UK would mean it might be hard to find a destination that truly felt like we were 'getting away from it all' and 'having an adventure', but this country offers such a rich history and environment to explore that it was no trouble at all. I always like being by the sea; the edge of the land, connected to the rest of the world by the water in front of me, so I was ashamed to say I had visited very little of Pembrokeshire despite having grown up only an hour away! The Pembrokeshire Coast National Park consists of 186 miles of coastal path that twists and bends along the limestone cliffs, sandstone bays, dune systems and estuaries. This myriad of landscapes means there is a huge array of coastal wildlife to discover, from puffins to the common blue butterfly.

Images: Coastline, Asia Roberts-Yalland

Read the full story on our blog at www.newnature.co.uk

OUR CONTRIBUTERS

Check out our amazing young contributors and connect with them online!

Alexandros ADAMOULAS

Al is currently at the University of St Andrews, working towards a Conservation Studies MSc. Happiest outside in the natural world, he dreams of a career in the wildlife sector.

@FindMeARareBird

Amber HOPGOOD

Amber is the Records Manager for the Birmingham & Black Country Amphibian and Reptile Group and runs her own wildlife society. She is also a final year Wildlife Conservation student at the University of Wolverhampton.

@ __amber__x__

Bryony JAMES

Bryony is always outside discovering nature's wonders – walking, wild-swimming, photography and travelling are her passions. A previous LEMUR+ Wildlife Conservation Trainee, she encourages others into the protection and conservation of nature.

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Camila QUINTEROS PEÑAFIEL

BSc in Agriculture, MSc in Biodiversity & Taxonomy of Plants. In other words, sheep lover, field botanist and passionate explorer with an adventurer heart that follows the north of the biological compass.

Pinterest: cl.pinterest.com/vaiteacq/

Ellen GODDARD

Ellen is a second year PhD student looking at the carnivorous pitcher plant *Sarracenia purpurea* (the purple pitcher plant) across Europe.

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Elliot KELLY

Elliott is a young nature enthusiast who participates in conservation work, both through direct volunteering at a reserve, and through writing about nature.

Natalie SABIN

Natalie has always loved nature, and in the past year has changed careers so she can dedicate her life to conservation. She is a keen birder and goes nowhere without her binoculars.

Georgie BRAY

Georgie is the acting farm manager at RSPB Hope Farm. She focuses her work on helping to integrate wildlife conservation with profitable yet innovative agricultural practice.

Rebecca McHugh

Rebecca is a recent Physical Geography graduate from North East Scotland. A lover of outdoor adventures, she's spent many happy hours exploring Scotland's mountains, coasts, islands and peat bogs.

Zach HAYNES

Zach is a passionate Yorkshire based naturalist, blogger and photographer. Aiming to raise awareness of the importance of the natural world he aspires to work in conservation.

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CONTACT US

Let us know what you thought about this issue of *New Nature*, or what you would like to see in future issues.

We are always on the lookout for young writers, photographers and artists. Please get in touch if you are interested in submitting work.

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