FEBRUARY 2017 | Issue 2

New Nature

PLANET EARTH:

Are documentaries a help or a hindrance?

You decide on page 32

JOHN LEWIS-STEMPEL

The award-winning author, historian and farmer tells us what inspires his nature writing.

"Spring is not far away."

Tiffany Francis, page 12

Winter Butterflies: Hairstreak Heaven on Page 17

Butterflies • Badgers • Curlews • Raptors • Rewilding • Planet Earth • Wildlife Facts

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Image: Phil Gates

Image: Will Langdon

Image: Dara McAnulty

Image: Gus Routledge

On the Cover

Our beautiful cover shot this month was taken by Oscar Dewhurst.

Oscar is a 21-year old award-winning wildlife photographer from London. He has taken photos in locations ranging from the side of the A1 in London to photograph Waxwings to the heart of the Peruvian Amazon to capture Howler Monkeys.

Find him on Twitter @OscarDewhurst and online at www.oscardewhurst.com

Image: Villager Jim

Image: Kelly Astley

Image: Alex Pearce

WELCOME TO

New Nature

MEET THE TEAM

James Common
@CommonByNature
www.commonbynature.co.uk

Alexandra Pearce
@PearceAlex1
www.alexandra-pearce.com

Alysia Schuetzle
@ASchuetzle

Alice Johnson
@AJohnson2810
www.naturenattering.wordpress.com

It is hard not to be inspired by the passion of Britain's young naturalists...

By their dedication to recording, studying, promoting and more importantly, protecting the wildlife with whom we share our fragile countryside. Such people- the rising stars in the world of natural history- give great cause for celebration day in, day out and above all else, give great hope for the future. So much so that I am delighted to feature yet more fabulous young naturalists in this, the second issue of New Nature magazine.

Here you will find talk of botany, courtesy of the wonderful Gus Routledge (page 9), evocative nature writing from Tiffany Francis (page 12) and a passionate opinion piece from young campaigner Georgia Locock (page 29). As well as interviews with well-known faces in the realm of natural history and myriad other interesting titbits, both from the New Nature team and our other lovely contributors. I sincerely hope you enjoy it; and that should this be the case, you will consider spreading the news far and wide on social media.

The team here at New Nature are incredibly grateful for the support we have received so far: from familiar faces in TV and media, from conservation organisations and from each and every person who has to date, shared, viewed or commented on our work. We would, however, like to stress that the opinions given breath in the magazine are those of the individual contributors – each of whom are entitled to their opinion – and not the views of the magazine or those behind it.

James Common
Editor in Chief

EMAIL:
EDITORIAL.NEWNATURE@GMAIL.COM

VISIT:
W W W.NEWNATURE.CO.UK

T WITTER/FACEBOOK:
@NEWNATURE_MAG

SAY HELLO

WHAT'S ON IN FEBRUARY

Nest Box Building

Discover how to make your own nest box to take home and put up in your garden.

Woodside Plant Centre, Jedburgh
12th February, 11am-1pm

Giant Lego Nature Trail

92,400 lego bricks were used to construct this trail of 10 giant animal and bird sculptures.

Castle Espie Wetland Centre
11 February - 2nd April

The Secret Life of Badgers, Muntjac Deer, Polecats and Otters

Talk by Mal Ingham, Head Ranger.

The HWB, Denbigh
19th February, 2.30-4.30pm

Winter Tree Identification

Discover the trees without their berries & fruit. Search for signs to help with winter tree ID.

Parc Slip Nature Reserve
21st February, 2-3.30pm

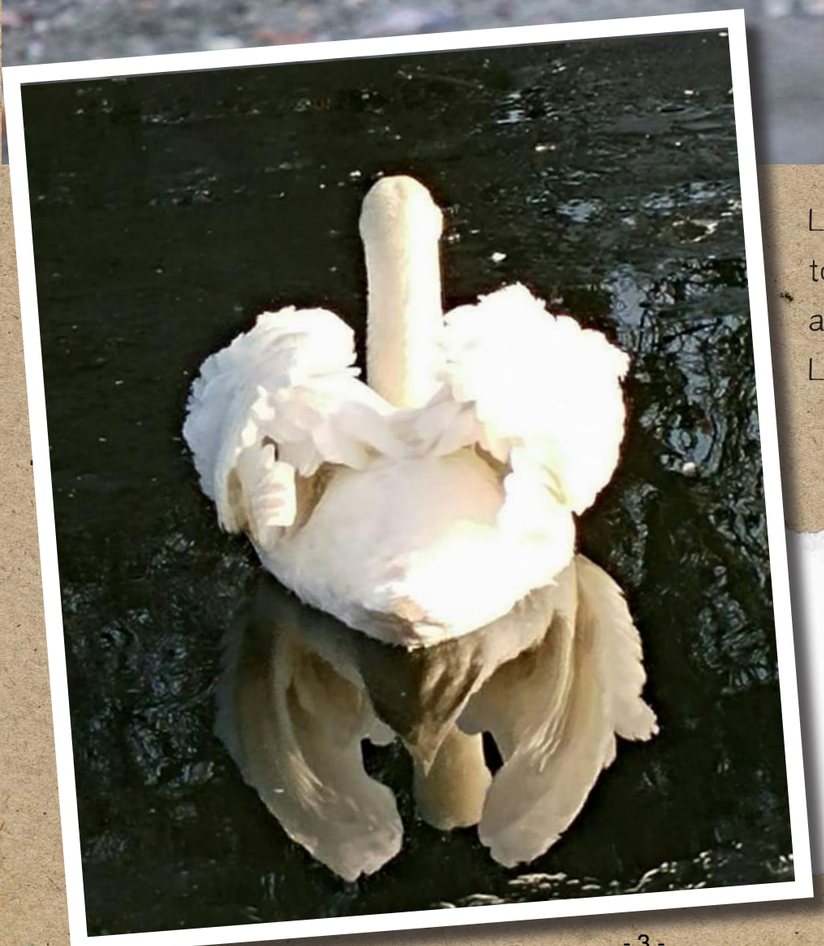
Hedgelaying Training Day

Learn hedgelaying with Martyn Shire of the SHG and Mark Green of Somerset Wildlife Trust.

New Hill, Somerton
26th February, 10.20am

JANUARY IN PHOTOS

Check out just some of the lovely photographs our readers have taken of their January adventures.

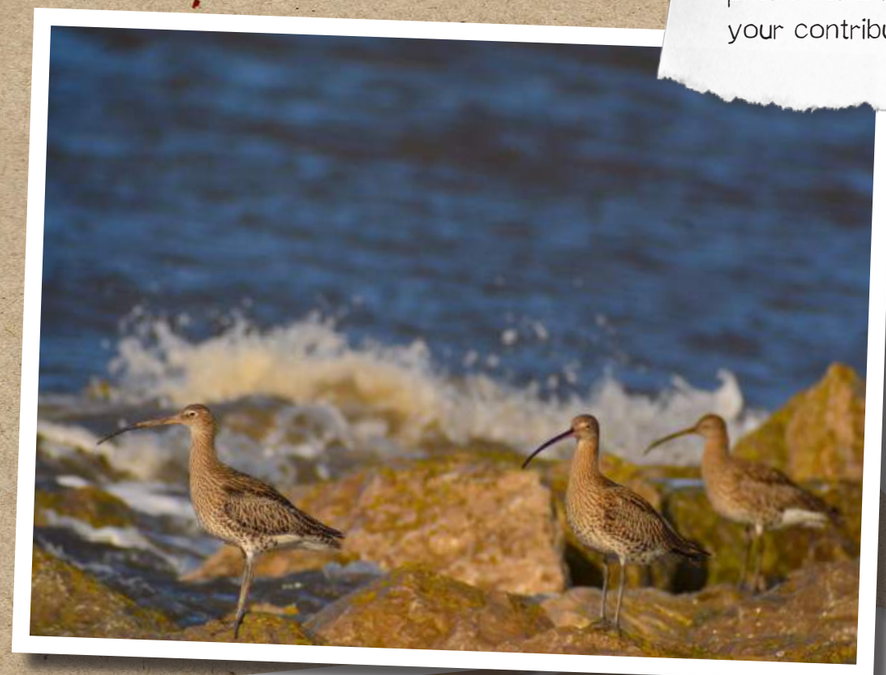


Luke Nash (@young_birder89) took this fantastic photo of a very obliging marsh tit at Lynford Arboretum in Norfolk.

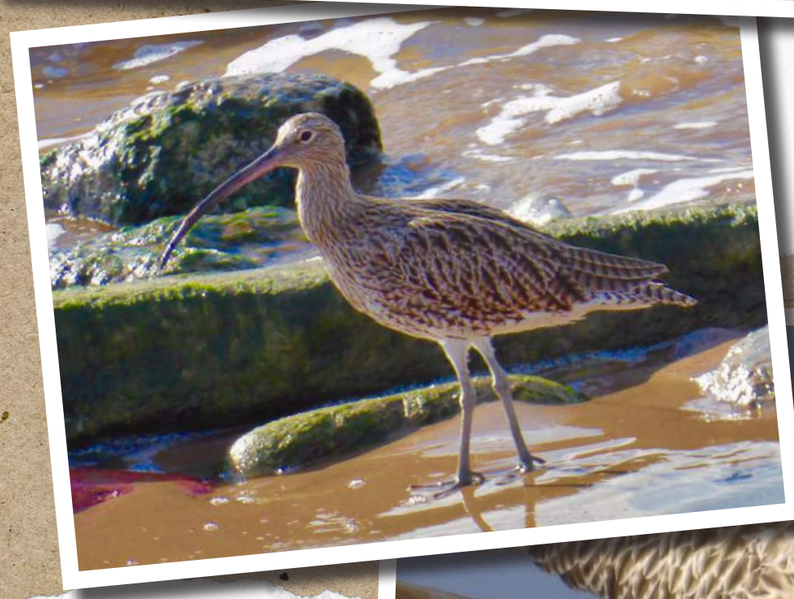
Check out the reflection of this beautiful swan, snapped by Jo Phillips (@playinwild).

CURLEW CORNER

We asked you to contribute some curlew photos- and we received a phenomenal response! Thank you for all your contributions- here are just a few.



Bernard Phillips (@aliaswither) sent us this atmospheric shot- thank you!



Chris Caldwell (@BirdsofDartmoor) submitted his photograph of this elegant bird.

@JarrowBirders sent us this great close-up of a curlew wading through the mud.

WHAT TO WATCH FOR
in February

Frogs, rooks and jackdaws- James Miller and Fabian Harrison tell us what to watch for this month.

Image: James Miller

They wander in their hordes, unaware of the risk. Drivers, even if they are good enough to stop for a few amphibian pedestrians, often do not see them until the last moment – if at all.

"A truly unmissable miracle of nature, and this is the month in which it kicks off."

When we think of February, we often think of it as the coldest, harshest month of the year. Temperatures averaged 3.9 degrees Celsius in 2016, and dipped below -14 degrees in Aberdeenshire at one point. The (deciduous) trees are bare of leaves, and the countryside is seemingly bare of wildlife.

Not a month we would associate with new life. Especially not in cold blooded animals.

However, there are a few species that start thinking about breeding before we take off our winter socks. One of these is the Common Frog.

After having sat hidden at the bottom of a pond for winter, absorbing oxygen through their skin, slowing their metabolisms down to the minimum, they are 'woken up' by any warming of the surrounding environment. Because of the unpredictability of the British seasons, this can be any time from New Year to April, but it is usually late February to March.

The frogs then begin their languid trek to their breeding ponds, led by the scent of glycolic acid produced by algae in water.

This can be perilous, because although they know where to march to their ancestral breeding grounds, the roads that have sprung up are a comparatively recent phenomenon, and haven't been programmed in.

Which is why the Frog and Toad Patrols are so important. Volunteers help the amphibian populations by collecting them in buckets, and transferring them safely to the other side of the road.

Hence starts one of the greatest transformations of the British fauna – the transition from spawn to frog.

Once they have found their way to the breeding ponds, the males vocalise loudly, competing for the attention of the females. Having attracted a female, they grasp them in a position known as amplexus, and release sperm onto the eggs as she lays them.

A female can lay 3000 eggs, protected by globules of glycoprotein (which swells upon contact with water – in case you were wondering how a frog can possibly fit that much in them!). These in themselves are amazing to look at, especially in such large quantities.

Over time the embryos feed off their jelly and hatch into tadpoles – this happens after 2-3 weeks. At this stage they are essentially fish, complete with tail and gills. Only after 3 months do they actually resemble frogs, by which time front and hind legs are grown, and gills and tail are reabsorbed into the body. By the time they leave the pond the vast majority will have perished, due to the abundance of predators that feast on them.

A truly unmissable miracle of nature, and this is the month in which it kicks off. When the temperature outside starts to climb above 5 degrees, you should be on the alert for breeding frogs.

Image: James Miller

Image: Fabian Harrison

February is a great time to see big wildlife spectacles, as some bird species gather in large numbers for safety and survival. This year I decided to finally watch a corvid roost. As the sun set and the mist started to roll in I headed off down to Buckenham Marshes in Norfolk. Wandering down, I was accompanied by small groups of rooks and jackdaws, which were making their way to the surrounding trees, telegraph poles and fields around their roost site. As more came in I began to wonder whether it would be too dark to see them go to their roost, but just as the light faded, up they went. 50,000 birds came floating out of the mist towards me in a cacophony of noise. They flew around for a couple of minutes in the thick fog before swooping down into the sycamore trees below. Within minutes of going down, they were silent, ready for tomorrow. Corvids are extremely intelligent and it has been found that they do not roost together for the warmth, but to share intelligence of food sources in the area.

Corvid roosts are viewable all around the country between November and February and show especially well on cold, windy nights. You can contact your local RSPB or Wildlife Trust group to see if they know of a corvid roost near you. If you visit a site, please don't use flash photography, but do keep a sensible distance from the roost to avoid disturbance.

FH

WHERE TO VISIT

Although the weather may be cold, February is a great month for winter wildlife watching and walking.

Words: Alice Johnson

Image: Ben Andrew (rspb-images.com)

Ken-Dee Marshes, Scotland

The RSPB Ken-Dee Marshes reserve is located in an area of stunning scenery next to Loch Ken. The reserve is a regular overwintering site for Greenland white-fronted geese as well as greylags. Stars of the skies here are the red kites, which glide over the reserve as the winter light displays their silhouette, making their forked tail clearly visible. The reserve has several hides and a nature trail where a variety of species can be seen, including willow tits and red squirrels.

The Dee Estuary, Cheshire/Wales

The variety of habitats present, including saltmarsh and estuaries, provide varied opportunities for different species. There are several reserves along the estuary including RSPB Burton Mere Wetlands, where you can see wildfowl, waders, birds of prey and starlings. The two hides and several nature trails make it a great spot for birdwatchers and families. The RSPB reserve at the Point of Ayr is a perfect place to watch flocks of waders, while the Parkgate marshland reserve could provide you with a glimpse of a breath-taking bird of prey, such as a merlin or hen harrier.

Image: Andy Davis

Drumburgh Moss Nature Reserve, Cumbria

This Cumbria Wildlife Trust reserve is an ideal place for a winter walk, with the possibility of seeing birds of prey, including short-eared owls, among other wildlife, such as roe deer. Exmoor ponies graze areas of the site, for example the heath and grassland, as grazing is a key to habitat management here. This reserve protects important lowland raised mire habitat, and 13 species of the sponge like *Sphagnum* moss have been recorded on the site.

Image: Florence Acland

Image: Tom Hines

London Wetland Centre

Run by the Wildfowl and Wetlands Trust this reserve next to the River Thames is a prime spot for winter wildlife. The network of open water, reedbed and marsh provides great habitat for a variety of species, such as wildfowl like wigeon, pintail, gadwall and shovelers, and reedbed specialists like bittern and water rail. There are various walks and talks run at the reserve this month, such as owl pellet workshops and bird feeds with the warden.

Wicken Fen, Cambridgeshire

This well-known reserve is managed by The National Trust and is a popular attraction for nature enthusiasts throughout the year. The must see winter favourites are the birds of prey, with short-eared owls seen hunting over the reserve during the afternoon, as well as barn owls. There is even the chance of seeing a hen harrier. The reserve is home to a variety of other species, such as kingfisher and wildfowl like wigeon.

Image: Gary Gray

IN BLOOM

Gus Routledge goes hunting for plants with the BSBI as part of their New Year Plant Hunt.

Images: Gus Routledge

What do you find yourself doing at the start of the year? Getting those first birds on your year list? Going for a nice relaxing stroll with the family? It might even be that bryology is your New Year's entertainment? Things you can do in winter basically, right? If I told you I was out looking for flowers you may call me mad. Frost, wind, cold, snow; all of the above don't tend to give you the best chance of finding flowers, but nevertheless, I was not the only one out recording plants in bloom at the New Year!

The New Year Plant Hunt is an event that is run by the Botanical Society of Britain and Ireland in which anybody can join in finding as many wild/naturalised plants that are in flower in the first four days of the year. Plant hunts can last up to three hours, making it possible for anyone to go out and record; from the casual observer on their New Year family walk to the hardcore botanist that has planned out their route to the tee throughout December!

This year was the sixth New Year Plant Hunt, and was the most popular yet! Over four hundred lists were compiled by botanists and sent to the BSBI for analysis and here are the results, as analysed by Dr Kevin Walker.

Plants

With 455 lists submitted from up and down the country, the far north to the far south, from the east coast of England to the west coast of Ireland, a huge number of individual plants were recorded in flower. No fewer than 7123 blooms were botanised by botanists!

Of course, this is an incredible number of flowers for the time of year and not only does this highlight the brilliance of citizen science, but it also gives us something to look at and think about scientifically. Why and how are these plants surviving into the winter months? Personally, almost all of the flowers I saw on my two plant hunts this year were late bloomers as opposed to flowers that were coming out early. This possibly points towards warmer winters, where the plants are able to continue to produce their reproductive parts for a longer period.

In comparison to the previous year, this is just over 2000 fewer plants in flower recorded across Britain and Ireland. This makes sense though, as last winter was very mild, with hardly any frost, whereas this winter, as I recall from my patch, there was almost a week of hard frost. It's a nice feeling when you look at the results from everyone else's New Year Plant Hunt and see that your patch follows suit. I'm not sure the same can be said for the state of our climate though.

Species

The statistics here show much the same trend, with 492 species being recorded this year compared with last year's whopping 653. This was in spite of the fact there was a record number of hunters who submitted their records, showing that this year was clearly just not as good for winter flower finding.

People

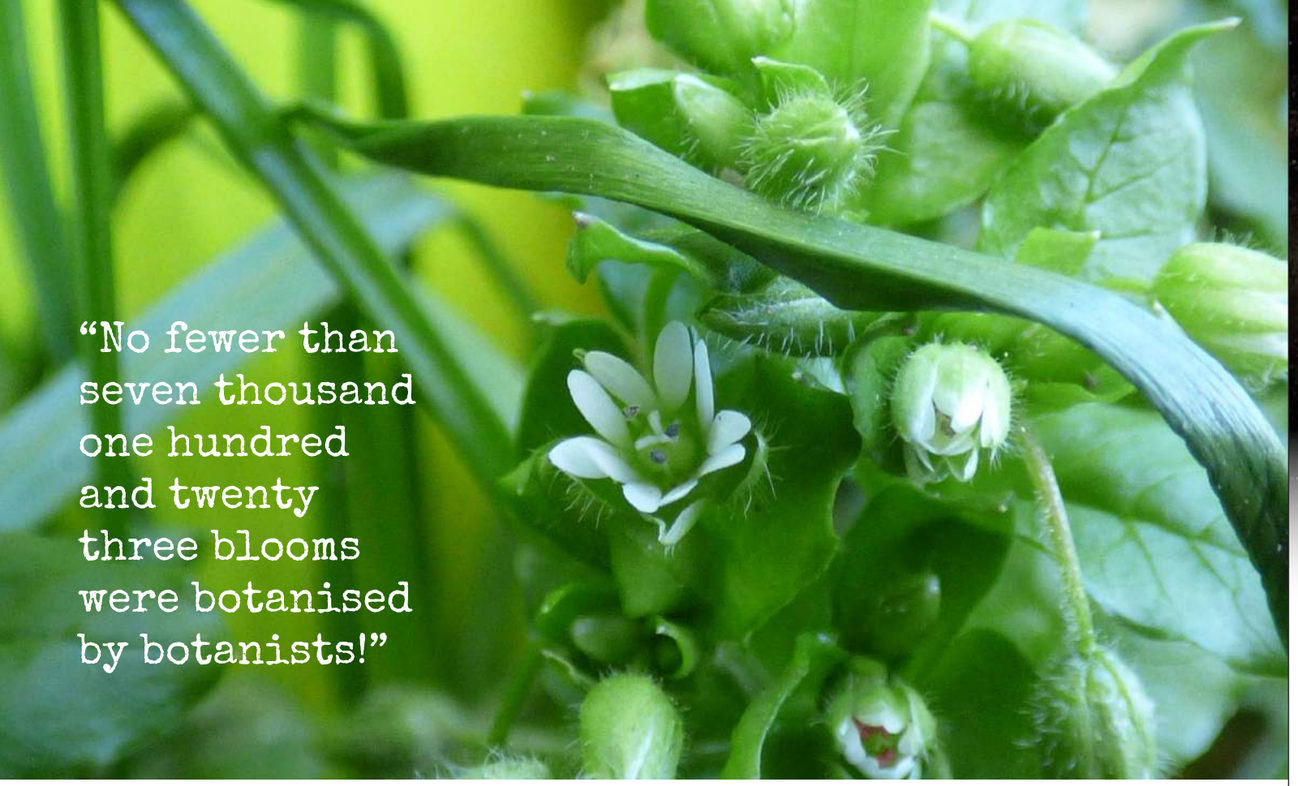
As has already been mentioned, 455 lists were submitted to the BSBI for analysis but this doesn't tell us how many people actually took part in the plant finding extravaganza. Although it may seem that very few people would be crazy enough to head out with their new gloves on from Christmas to go botanising, many people grouped together to maximise their likelihood of discovering flowers.

From my own personal experience, New Year Plant Hunts carried out in groups are far more enjoyable than going solo. My first ever plant hunt last year was with a group and it was in fact the first time I had ever tried identifying plants. The New Year Plant Hunt turned out to be the best introduction I could have had to botany, due to the fact I was surrounded by others who were either already

well clued up when it came to stipules and stamens, or were like me and could barely tell a petal from a sepal!

Having developed my botanical knowledge over 2015, I still found myself learning from others and passing on my knowledge to people far more experienced than myself. The whole layout of the New Year Plant Hunt allows for anybody to join in and have a great time doing so.

In the end, there is no definite figure for people this year,



but with 2.7% more lists than last year, when there were 865 participants, we can roughly estimate there were about 888 people partaking in the 2017 New Year Plant Hunt.

Dr Kevin Walker has done a terrific job of sorting through all the records that have been sent in and has come up with some interesting figures that may start some interesting discussion.

Firstly, 46% of plants found in flower were non-native (either escapes from cultivation, gardens, or those which have become naturalised after years in the British Isles and Ireland). Is this something to be worried about? I know that I was seeing species such as green alkanet and pineapple weed, both common in our countryside and both non-natives. More non-native species means increased competition for our native plants that are specifically adapted for UK ecosystems. I know that I don't want any more Himalayan balsam or Japanese knotweed out-competing our wonderful flora.

Secondly, looking at the map on the New Year Plant Hunt webpage it is quite evident that a lot of records have been sent in from within towns, villages and cities. Some of the most productive spots on my patch were along roadsides and in alleyways. This is likely down to the fact that our settlements have their own little microclimates, making the conditions more favourable for our flowering plants. The shelter offered by a stone wall is far greater than that offered by an open cliff face.

So, if you want to start next year by becoming a beginner botanist, learning more about the plants around you, or take part in science, then the New Year Plant Hunt is what you should be doing! Unfortunately you'll have to wait until next year for that but then again why wait until then? The 20th of March is officially the start of Spring so with help from others, such as the 'Get Involved' page on the BSBI website, you could make 2017 your year of botanical discovery!

For the most up to date information on the New Year Plant Hunt visit http://bsbi.org/new-year-plant-hunt

A Winter's Tale

"On cloudless nights, the sky transforms into a velvet canvas of stars" Tiffany Francis takes us from winter to spring on her patch in South Downs National Park.

I've had a hole in my wellies for the last six weeks, but, forever determined to spend as little on footwear as possible, I'm finding a way to make them last until spring. A solid plan indeed, until January descended and Hampshire was transformed overnight into an oozing quagmire of mud and drizzle. My 'patch' is my workplace, an educational farm in the South Downs National Park specialising in experimental archaeology, rare breed animals and prehistoric buildings. In summer it lies sun-drenched in solitude, worlds away from modernity; a capsule of silence broken only by the dizzy hum of buff-tailed bumblebees.

Winter has a different tale to tell.

With raincoat zipped and strong coffee in hand, I leave the warmth of the office and step out into the rain for my early morning walk across the site. The air is murky and will not brighten until the winter sun seeps blearily through the clouds like a hangover emerging from the duvet, but it's good to feel cold air in my lungs after the heat of the radiator.

Last autumn the hedgerow was stuffed with pink spindle berries, pumpkin-shaped orbs that have since rotted and grown brown over winter. There are still enough leaves in the thicket to hide our population of garden birds, and when the goats have finished their breakfast grains the ground is stampeded by sparrows, dunnocks and brutish cock pheasants battling for the leftovers. In the pig paddock nearby, a pied wagtail weaves a path through volcanoes of mud, upturned by pig snouts hunting for scraps; our sows gave birth to seventeen piglets over Christmas, and on warm afternoons they have started exploring the world beyond their sty. In today's gloom, however, they will pile themselves into a mound of wriggling plumpness and doze under the heat lamps.

Looking up, I find sweet chestnut cases lingering on bare branches; their siblings lay crushed and damp on the floor, remnants of brighter autumn days. The rowan tree bore no fruit this year, but has instead been home to a flock of chaffinches and goldfinches, the latter of which stay close to the wildflower bank where wild teasels grow tall in the August sun.

At the back of the farm stands a walnut tree and two beehives, garden features for our Roman villa which glows lime-white against the drab landscape. The Romans have long since departed this farmhouse, but within its walls now live a pair of kestrels, who have taken up residence through a window which has been left glassless to provide shelter for wildlife. We find pellets on the thick stone sills and watch the pair hovering like drones nearby, picking out unsuspecting rodents from the flinted fields. Groups of babbling schoolchildren force them to relocate through the day, but by late afternoon they return to their post on the villa roof, watching the staff and volunteers with great superiority.

By early evening the farm is cloaked in frost, bejewelled cobwebs suspended from every surface. Due to low levels of light pollution in the South Downs, on cloudless nights the sky transforms into a velvet canvas of stars, a thousand constellations telling the stories of gods and hunters, bears and eagles. For Christmas I was given a trail camera to watch wildlife, and across the farm there are fox and badger prints waiting to be excavated in every slab of mud. Before leaving for home, I scoop a few chunks of dog food onto the ground, crumble over half a packet of mini cheddars, and clip my camera onto a wooden stump (I remembered the batteries this time).

A song thrush starts singing from its hidden seat deep in the conifers. Of all the harmonies we are offered by the birds of Britain, the song thrush strikes the most primitive chord in my chest. When I first moved back to Hampshire after living in London for a year, a place that brought me new experiences but no contentment, one of the first wild sounds that greeted me was the changing call of the song thrush convincing me I'd heard three different birds in a row. For me, this song ignites the hope that spring is not far away, and as I count the first catkins growing in the hazel grove, I sense the closeness of new life, sunlit evenings and the aroma of wild garlic.

Images: James McCulloch

Curlew

Image: Phil Gates

The haunting call of the Curlew is one of the most iconic sounds in nature. Especially in Britain; where rippling trill of our largest wading bird evokes heather clad, purple moorlands and windswept coastal estuaries. It is a sound that ensnares many, myself included though one that, sadly, is heard less often these days. Britain's Curlew population is currently plummeting and these endearing birds are spiralling ever closer to extinction– the Curlew has been subject to a 46% decline in numbers between 1994-2010 alone.

The factors attributing to the decline of the Curlew are not widely known, though a number of explanations have been put forward. Among these, it is thought that climate change, afforestation, changes in farming practice and an increase in generalist predators such as foxes and crows may be to blame. All of which, through a decrease in suitable habitat and an increasingly low rate of nest success, have placed our breeding Curlew under substantial pressure. Indeed, the situation facing this endearing wader is not bright, nor hopeful, though while the causes of their woeful decline remain open to speculation, the importance of the British Curlew population is clear: Britain holds 28% of Europe's Curlew population, and more must be done in order to protect them.

Vital research and monitoring courtesy of the British Trust for Ornithology (BTO) is helping us to better our knowledge of the species and provide a sound, scientifically valid basis for future conservation work. An extensive (and costly) program of ringing, GPS tracking, remote tracking and research contribute to this work. Work which cannot take place absent of public support and is now more than ever, vital if we are going to bring the Curlew back from the brink. This is why, following no end of brainstorming, Sacha Elliott and I have decided to do something positive and actively support the BTO's recently launched Curlew Appeal.

CURLEW CHALLENGE

When toying with ideas on how to raise funds for the appeal, Sacha, Tiffany and I wanted to do something a little out of our comfort zone, thus something energetic seemed like the obvious choice. We are after all, (by our own admission) not particularly sporty. The reason why we have opted to commit to the Yorkshire 'Three Peaks Challenge' during summer 2017? To challenge ourselves physically and fund-raise for what we feel is an incredibly important cause.

The challenge takes in the peaks of Pen-y-ghent, Whernside and Ingleborough and involves some 40km of hiking over often challenging ground: accomplishable in around 12 hours. This is easily the most walking that either of us have done before and will surely prove testing- especially for moi, a beer-bellied former e-cigarette addict with a particular aversion to anything that vaguely resembles exercise. It will not be easy, but we are determined to see it through.

Prior to undertaking the trip next summer, we have set up a Just Giving page to raise money for the BTO and have broadcast an open offer for others to join us in our venture. If you too would like to take part, and thus raise both funds and awareness of the fight to protect our Curlews, you can join our fundraising team. Equally, and perhaps even more importantly, you can support our campaign, both financially – if you can spare the change – or by sharing it with friends, family or anyone else you feel might like to donate. Every little really does help, and if we are to reach our team target of £1000, we will certainly need your help.

If you would like to donate, or indeed learn more about the project, you can visit my Just Giving page via the link below.

https://www.justgiving.com/fundraising/James-Common2

UNDERRATED SPECIES:

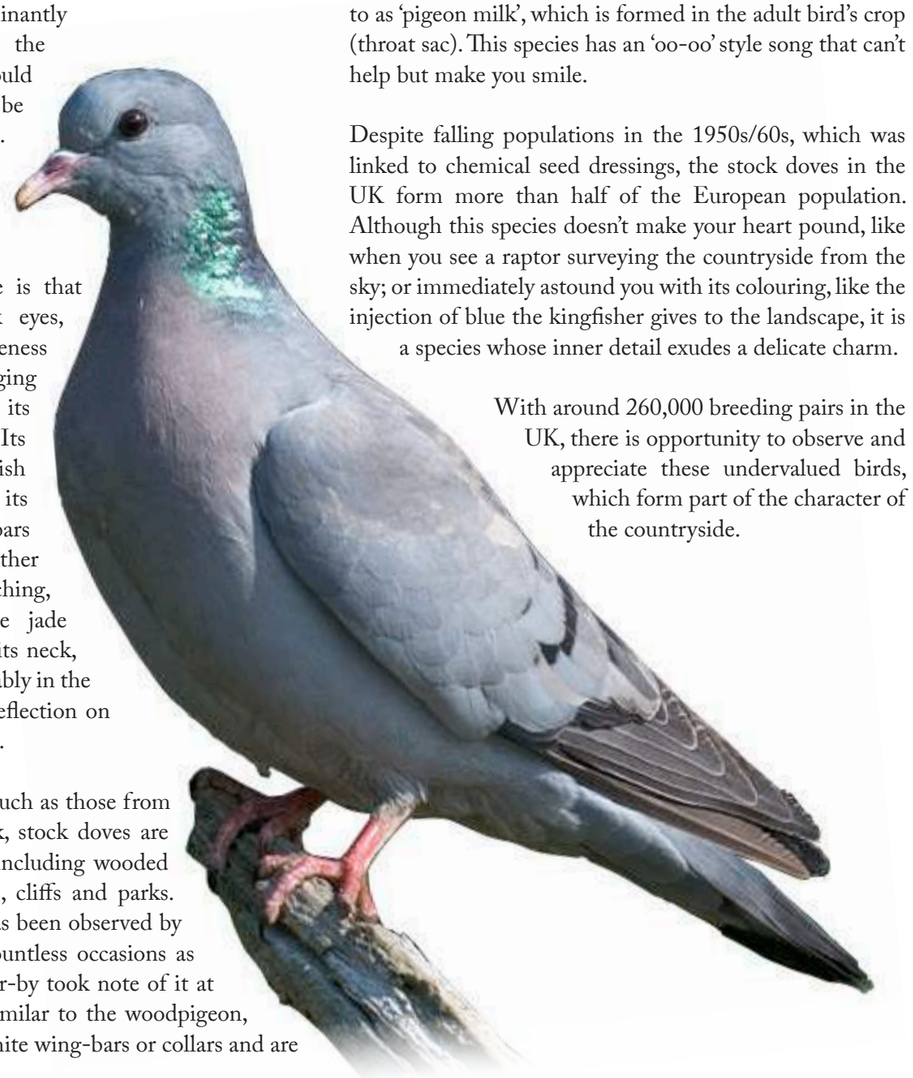
STOCK DOVE

Columba oenas

Words: Alice Johnson

Birds in the UK are not thought to be exotic or particularly colourful; they are dismissed as predominantly brown, grey or black in plumage and therefore dull and boring. It is however often the case that when observing a bird in detail you realise its individual beauty and value. The stock dove is one such bird.

Stock doves appear predominantly grey in colour and to the uninterested viewer would more likely than not be referred to as a pigeon. They are however quite different to this common urban dweller. One noticeable feature of the stock dove is that it has rather large dark eyes, which add a certain cuteness to its face, while encouraging you to observe more of its undervalued features. Its 'grey' plumage has a bluish tinge to it, and along with its pinkish breast and black bars on its wing, it is in fact a rather attractive bird. An eye-catching, prominent feature is the jade green iridescent patch on its neck, which shimmers unforgettably in the right light, like the sun's reflection on the surface of a calm ocean.



Living on a diet of seeds, such as those from crops and plants like dock, stock doves are found in various habitats including wooded farmland, woodland edges, cliffs and parks. It is likely that this bird has been observed by many but dismissed on countless occasions as a woodpigeon, if the passer-by took note of it at all. Although somewhat similar to the woodpigeon, stock doves do not have white wing-bars or collars and are noticeably smaller in size. Another similar species is the rock dove/feral pigeon but the latter has visible plumage differences to the stock dove and a red colouring to its eye. During display flights the stock dove flies on steady, slow wingbeats and floats with wings in a shallow 'V' shape. They nest in tree holes, on cliff ledges or in nest boxes, where two eggs are laid. The chicks are fed on 'crop milk', also referred to as 'pigeon milk', which is formed in the adult bird's crop (throat sac). This species has an 'oo-oo' style song that can't help but make you smile.

Despite falling populations in the 1950s/60s, which was linked to chemical seed dressings, the stock doves in the UK form more than half of the European population. Although this species doesn't make your heart pound, like when you see a raptor surveying the countryside from the sky; or immediately astound you with its colouring, like the injection of blue the kingfisher gives to the landscape, it is a species whose inner detail exudes a delicate charm.

With around 260,000 breeding pairs in the UK, there is opportunity to observe and appreciate these undervalued birds, which form part of the character of the countryside.

STAIRWAY TO HEAVEN

Dara McAnulty

Co Fermanagh, in case you don't know, is a place of wild and rugged beauty. Its very special landscapes are part of Northern Ireland, but are surrounded on three sides by the Republic of Ireland, this gives many people here a different viewpoint and an intense love and respect for one of its most special natural landmarks – Binn Chuilceach (meaning chalky peak in Irish) or Cuilcagh Mountain. It stands 666 metres above sea level and welcomingly dominates our vista, our hearts and our minds. We can see it from our house and from it, judge the weather for any activity we have planned.

Our family were lucky enough to make the six hour hike amongst blue skies. The hike took us along the Legnabrocky trail; over the newly installed boardwalk, which protects the amazing and vitally important blanket bog; and then we ascended into the clouds. On the way, the skylarks were our companions, our soundtrack on this majestic journey. As the meadow pipits bobbed they brought a smile to my face on this sort of pilgrimage, I felt what some people might in a church or place of worship. I felt a tangible connection to my place in this world. I'm not the only one, since the boardwalk was finished in 2015, many locals have named it 'Stairway to Heaven'. The amount of people walking the path and feeling the thrill and connection that this climb can give, has risen exponentially. We are incredibly proud of our very own 'Great Wall'.

The pungent smell of turf, the waving bog cotton (which can be a sign of bog disturbance) and the croak of the raven; it was impossible not to feel a sense of the imposing and sometimes stark. In the 1990's the intensive turf cutting industry and heavy sheep grazing was damaging the precious bog. So, Fermanagh Council took steps to look after parts of the mountain, putting in place a restoration project. Building mini dams and lowering grazing has slowed down run-off, helping the bog to recover. The Sphagnum has since returned and all bog specialist plants (asphodel, cranberry and sundew) have flourished. It has been returned to a mindset of protection and respect; not profit and production.

Stopping along the way as we ascended to take in the views, my heart burst with pride and wonder. Gazing down at Lough Atona from the top of the steep boardwalk steps, a lake nuzzled at the foot of the mountain which was formed by the glacier during the last Ice Age 13,000 years ago, we gasped as a shred of cloud dropped out of the sky and shrouded us. A warning that we are at the mercy of this magnificent mountain. We were stopped in our tracks, feeling defeat at not reaching the summit stone, but we must always pay heed to the messages of nature. As we descended the rain came and the wind howled, luckily we were all prepared! Making our way to the bottom, we were greeted by sunshine, blue skies and a sense of calm, as if nothing had changed, as if the rain clouds and winds were but a dream.

WINTER BUTTERFLYING

Will Langdon teaches us about the joys of butterflies in Winter.

There comes a time in any butterfly-lover's year, a dark time, a bleak time, a time when the red admirals have left the ivy, and the commas the rotten apples. It's a time of long dark nights and short cold days. For a lepidopterist, winter can be a truly desolate season.

Sadly too, it is a long one, and as such, a survival strategy is required. This is where one of the Britain's most famously elusive, capricious butterfly families climbs down off their pedestal and comes to our rescue, enter….the hairstreaks.

In the UK, we enjoy five species (green, brown, black, purple and white-letter), the latter four are our noble winter saviours, over-wintering in the egg stage, and providing vacuum-packed butterflies with which you can push through the off-season blues. Green overwinter as pupae in ant's nests, where they are remarked for making clearly audible noises to appease their guardians (most lycaenids do this, but green hairstreaks are particularly enthusiastic).

The arboreal hairstreaks (brown, black, purple and white-letter), are notoriously difficult to track down during the summer months. Brown flies at very low densities across the countryside, only congregating in good numbers at 'master trees' (normally ashes at a low point in the countryside) where males and females meet to mate before females go on their roving egg-laying missions along hedgerows (frequently surprising delighted butterfly recorders). Purple are less difficult to track down, favouring large stands of mature oaks (on which they lay their eggs), where they're particularly active on summer evenings (generally just after 5:30pm). Surely few sights are finer or more thrilling than the little silver flashes spiralling around the crown of an old oak as the sun sinks below the horizon, yet these remain one of the most chronically under-recorded butterflies in the UK. White-letters show a similar dedication to their foodplants - this time elms, most often wych elms, since these are the only ones able to survive Dutch Elm Disease long enough to produce flowers, vital in early larval development. The butterflies congregate around these, only occasionally descending to nectar on brambles, creeping thistles and hemp agrimony. Black hairstreaks enjoy the double sheen of both classic hairstreak capricious elusiveness and rarity, being

A purple hairstreak, typically aloof in the crown of an oak.

Images: Will Langdon

restricted to the band of clay between Oxfordshire and Cambridgeshire, where they tend to sit haughtily in the top of mature blackthorn thickets.

The elusive nature of these butterflies, and the low numbers in which they often fly makes searching for the static eggs, that are more abundant than the adults, an invaluable surveying tool in the butterfly recorder's armoury. Brown is the species most often searched for in this way, with its eggs nearly always found in the join between one year old and two year old growth on young blackthorn. The eggs are bright white, rather like sea urchins, and can be quite easy to spot once you get your eye in, though proceed with caution, since blue-bordered carpets also overwinter as white eggs on blackthorn (though these are flat and oval). Structurally, purple hairstreak ova are pretty similar, though they tend to be somewhat harder to spot, since they're laid earlier in the year (when the adults fly in July), and tend to accumulate more algae, giving them a greenish hue. They're best searched for just below the terminal buds on oak trees. Purple and brown hairstreaks are the species best surveyed for in this way, since the eggs are quite bright, and their situations quite predictable. The value of this monitoring is particularly high for the elusive browns, perhaps best illustrated by their recent re-discovery in Middlesex, with the first eggs in over 20 years found this winter. White-letter hairstreaks are rather more cryptic, going for little brown flying saucers that are perfectly camouflaged on the growth scars on wych elm branches – perhaps one of the best concealed British butterfly eggs! Black, as in everything they seem to do, take the biscuit however, with a nondescript, spherical brown egg laid in old, mature blackthorn thickets (in contrast to brown hairstreaks). Their site selection seems to have been less well characterised than other species, so those hardy few butterfly enthusiasts that are prepared to search for ova have a real chance to further our understanding of this rare and beautiful species!

These four arboreal hairstreaks are not, of course, the only British butterflies that choose the egg for overwintering. Both high brown fritillaries, a couple of the golden skippers, silver-studded and chalkhill blues do it too, and this is what can be so exciting about butterflies – there is no set approach for each group, there is endless variation, and further layers to discover. The strategies we think we know even seem set to change. Red admirals are increasingly being seen laying eggs into December, with large white larvae often recorded feeding at the same time. The rules of the game are changing, and now, more than ever, the skills and commitment to track these changes in ecology and the distributions of our butterflies are vital – leps are not just for summer, they're for life!

Find out more: www.butterfly-conservation.org www.ukbutterflies.co.uk

Do you know your hairstreak eggs?

Can you work out which of the eggs below belong to which hairstreak butterfly?

A. Brown Hairstreak.

A. White-Letter Hairstreak.

A. Purple Hairstreak.

JOHN LEWIS- STEMPEL

John Lewis-Stempel is an author, farmer and historian, who has published many books including The Running Hare, The Wild Life, and Meadowland; winner of the 2015 Thwaites Wainwright Prize for Nature Writing. John was awarded 2016 Magazine Columnist of the Year for his nature notes in Country Life.

Here, John talks to Alexandra Pearce about the importance of nature writing and where he looks for inspiration.

AP: What is it about nature writing that people love so much?

JLS: The financial crash of 2008; the vacuity of 'sleb culture'; the rule of Mammon (online shopping on Christmas day?!) and the slow death of the Church of England has left a vacuum in which people are searching for values and meaning. Nature has both.

AP: What is your writing process?

JLS: I'm a farmer as well as a writer. I do most of my writing in my head when I'm out farming – there is a lot of blank time in farming, trundling up and down in a tractor - and I jot things down on a scrap of paper as I go along. At the end of the day I write everything up in a notebook. (Hilariously, I use a Moleskine notebook, like Hemingway, in the hope that the excellence of the product will somehow invest excellence in my writing). Then I sit down for nights on end, typing up, tweaking the notes, usually to music, usually to the same track on a loop, which is anything from The Killers to Purcell.
If I get the infamous 'writer's block' I go for a walk. Walking 'frees' the mind. Solvitur ambulando, as the Romans put it.

AP: Give us a little perspective; how long does it take for you to write one of your books?

JLS: Well, The Running Hare, Meadowland, and The Wild Life all took me about forty years. I put myself into my books. Less pretentiously, it takes me about three months to get my notes into publishable shape.

AP: What recommendations would you give to young people who are interested in nature writing?

JLS: My advice on nature writing is 'Go outside. And stay there'. Find a patch of ground, or a species of animal or plant and get to know it so well that you and it are indivisible. Be the bird, be the tree.

AP: You are inspiring a whole generation of nature writers; where do you find your inspiration?

JLS: Well, to put the wildcat amongst the wood pigeons, I never really think of myself as a nature writer, more a writer about the English countryside. You could put me on the Galapagos Islands, and I'm sure I would be interested, but they would not mean

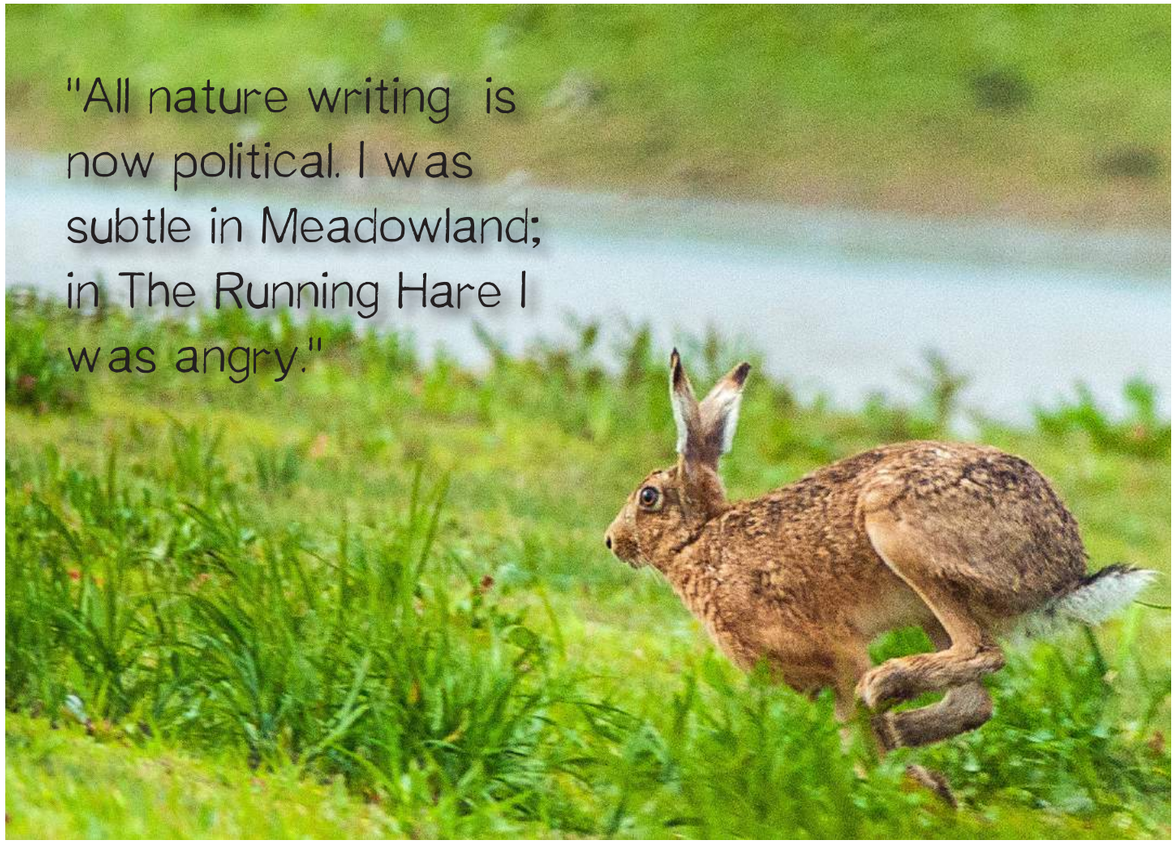


Image: Copyright: Kumweni - goo.gl/qRFDP5

the same to me. I don't do science, I don't do detached observation. I do the view from the inside out, not the outside in.

I try to lose myself so deeply in nature that I am communion with it. So nature is the inspiration. I'm just the translator.

AP: Any other inspirations?

JLS: My grandfather Joe Amos (the quintessential yeoman farmer), the Saxon shield wall at Malden, the conservationist Sir Peter Scott. I also read the old school nature writers. Their books are route maps for me, because I want to turn back time, to make British farmland once again loud with colour, bright with sound. My favourites? Edward Thomas, Richard Jefferies, John Clare, John Stewart Collis (a Second World War farmer, proto-ecologist, author of The Worm Forgives the Plough), and above all, 'B.B,', whose real name was Denys Watkins-Pitchford.

"Nature is the inspiration. I'm just the translator."

AP: What do you think the future holds for our environment?

JLS: There is a holocaust of wildlife occurring on our fields because of intensive farming.
Post Brexit we need farming that is productive, and sustainable. Farmland covers 70% of the surface of these isles. It should be the main battleground of conservation.

All nature writing is now a political act. I was subtle in Meadowland; in The Running Hare I was angry.

AP: What can we expect from you in the future?

JLS: I'm going down to the woods, finishing a book called 'The Wood: The Life and Times of Cockshutt Wood'. It details a year in the life of a small wood (3 acres) I manage in south west Herefordshire. By manage, I mean in an old fashioned way, with pigs, sheep and even cattle browsing there. It's a working wood. The constant in all my nature books is the belief that humans, wildlife, and livestock can share the same space.

Thanks very much, John!

COUNTRYSIDE JUXTAPOSITION

Bobby Gant

The first snow of the new year hadn't lasted long in West Yorkshire. Still, a cold and crisp Saturday morning with retreating remnants of snow on the ground seemed like the perfect conditions to get out and go for a walk, binoculars in hand. A couple of miles from where I live in semi-rural West Yorkshire (near Wakefield) stands a decent patch of woodland, surrounded by farmland.

I've visited this area a few times and have been surprised by the wildlife I've seen whilst walking the few paths and tracks that wind through the trees and along the gentle wooded hills. Woodpeckers, buzzards and deer, all spotted without binoculars whilst out walking for the enjoyment of it. So I was pleased on this particular Saturday to convince my girlfriend to come out with me, promising her much wildlife and a peaceful few hours in the great outdoors.

Things started well. The sky was blue and we had views stretching for miles, over towards Barnsley in South Yorkshire, and away westwards towards the Pennines and Lancashire somewhere beyond. Our breath misted in the air before us and we made it into the woods without having seen a soul on route. We approached the outskirts of the woods from above, dropping down into old, established woodland from a public footpath that skirted along a raised area above the trees. On a fence post ahead, a robin serenaded us and we spotted a nuthatch flitting between the thick ancient branches of a couple of trees ahead of us.

The promise I had made of rich birdlife was being delivered almost effortlessly and despite the harsh temperatures, the trees were alive with bird song

"Holly, oak, pine and birch all clamour for light from the forest floor.."

and the nibbling and scrapping of grey squirrels in the pine trees above. After walking down the hill, we went through a gate onto farmland and edged our way around the muddy fields until we came to a stile which entered the woodland further around. On the fence there is a small sign, which lets walkers know that the owner of this area allows people to use their land but that they are under no obligation to do so. Hardly a warm welcome but still, on we went.

At this point the woodland becomes thick. Originally, I'd imagine part of this woodland was planted for commercial reasons. Tall straight pines, though not in particularly neat rows, are abundant. However, the land has a wild aspect to it. Dead trees aren't cleared, which creates perfect habitats for woodpeckers, other birds and a variety of mosses and fungus. There is also an abundance of new growth. Holly, oak, pine and birch all clamour for light from the forest floor. Don't get me wrong, this land is clearly still managed to some extent; there are tracks wide enough for vehicles to pass on and there are piles of logs which suggest some sort of logging has taken place here at some point.

There are also blue bins dotted around the woods, usually in small clearings. This is the point in the story where the conflicts and juxtapositions of the countryside revealed themselves all too clearly. Upon spotting one of these blue bins, my girlfriend asked what it was. Despite having an idea, I agreed to go and investigate with her. Hanging from the bottom of the bin was a small net holding seeds. The woods were clearly being managed for pheasants and other game birds.

I'd rather game shooting didn't take place. I struggle to see the sport or any form of enjoyment in killing animals. If it has to happen though, I prefer the idea of a biodiverse, semi-managed woodland being used as a way of breeding their game than bare, barren moors that can be found on the Pennines and in other highland areas of the United Kingdom. As we walked away, both a little downhearted at our discovery, we heard the first gunshot from a couple of miles away.

Trying our best to ignore it we continued further into the woods, stopping as we saw birds darting between branches and dancing among the trees high above. A flock of coal tits put on a real display for us and we enjoyed struggling to identify a small group of goldcrest that simply wouldn't stay still long enough to be spied properly.

Further along our walk the shooting started up again and we could hear the shouts of men (presumably the beaters) in between volley after volley of shotgun fire. Although it is fair to say it upset my girlfriend more than it did me, it would be a lie to say it didn't bother me. As we stood admiring a beautiful pair of siskin (which we had initially confused for greenfinch until a greenfinch arrived on the scene to make the differentiation much more obvious) it was difficult to ignore the gunshots. The beautiful opposed to the bloody. The peaceful world of the woods juxtaposed to the violent world of men.

As we left the woods to climb a country road back towards the village we had set off from we startled a female pheasant that flew upwards and out of the trees, distressingly heading in the general direction of the shotgun wielding people somewhere beyond the trees below us. My girlfriend cried out, "don't go that way". It was an awful moment. That probably sounds silly or over dramatic but it got to me. We have a couple of pheasants that regularly visit our garden. They have real character and are a beautiful bird. Why wouldn't the thought of them being massacred be disturbing to me?

I'm not going to get into how our land should be used and who has the right to do what in our countryside. That is a bigger debate for another time. After the painful juxtaposition

"The beautiful opposed to the bloody. The peaceful world of the woods juxtaposed to the violent world of men."

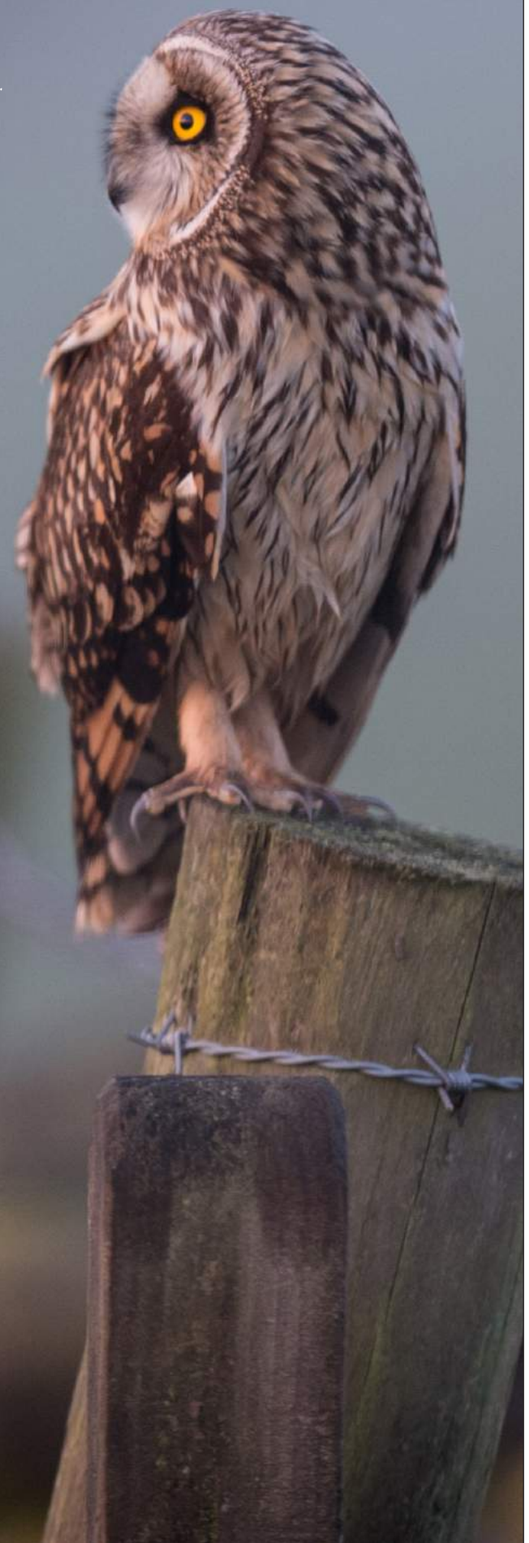
of two markedly different uses of the countryside, that walk left me with the feeling that it was something that was worth recording and reflecting on.

The countryside can be full of beauty, life and diversity. It can also be full of ugliness, death and damage. Experiencing both at the same time over the course of a couple of hours is something I won't easily forget.

5 minutes with... VILLAGER JIM

Twice winner of the Press Photograph of the Year award and once called the Banksy of the photographic world, Villager Jim is well known for his incredible photographs of wildlife and the landscape at his home in the Peak District.

Here, he tells us a little bit about taking award-winning shots...



AP: What came first for you; a love of wildlife or photography?

VJ: Wildlife! I only took up photography a few years ago, when I moved to my home in the Peak District

AP: What is it about wildlife photography that you enjoy so much?

VJ: Being alone and out at dawn with just the animals and no one around, the world's a different place at that time

AP: What camera do you use?

VJ: A Nikon D5; the love of my life!

AP: What do you like the most about nature photography?

VJ: The moment you know you have a great shot without even looking, those are special moments that make this an amazingly addictive thing to do!

AP: And what least?

VJ: Getting up when it's sleeting outside and minus 3!

AP: What recommendations would you make to someone interested in wildlife photography?

VJ: Learn to compose an image quickly! With that skill, everything else is easy; practice on butterflies, dragonflies and garden insects as you will soon hone the ability to take a good shot and compose it well, and at the same time you're not having to be on the moors or up a mountain!

Thanks!

See more from Villager Jim by heading to his website: www.villagerjim.com or follow him on twitter: @VillagerJim.

4 THINGS YOU DIDN'T KNOW ABOUT BRITISH WILDLIFE

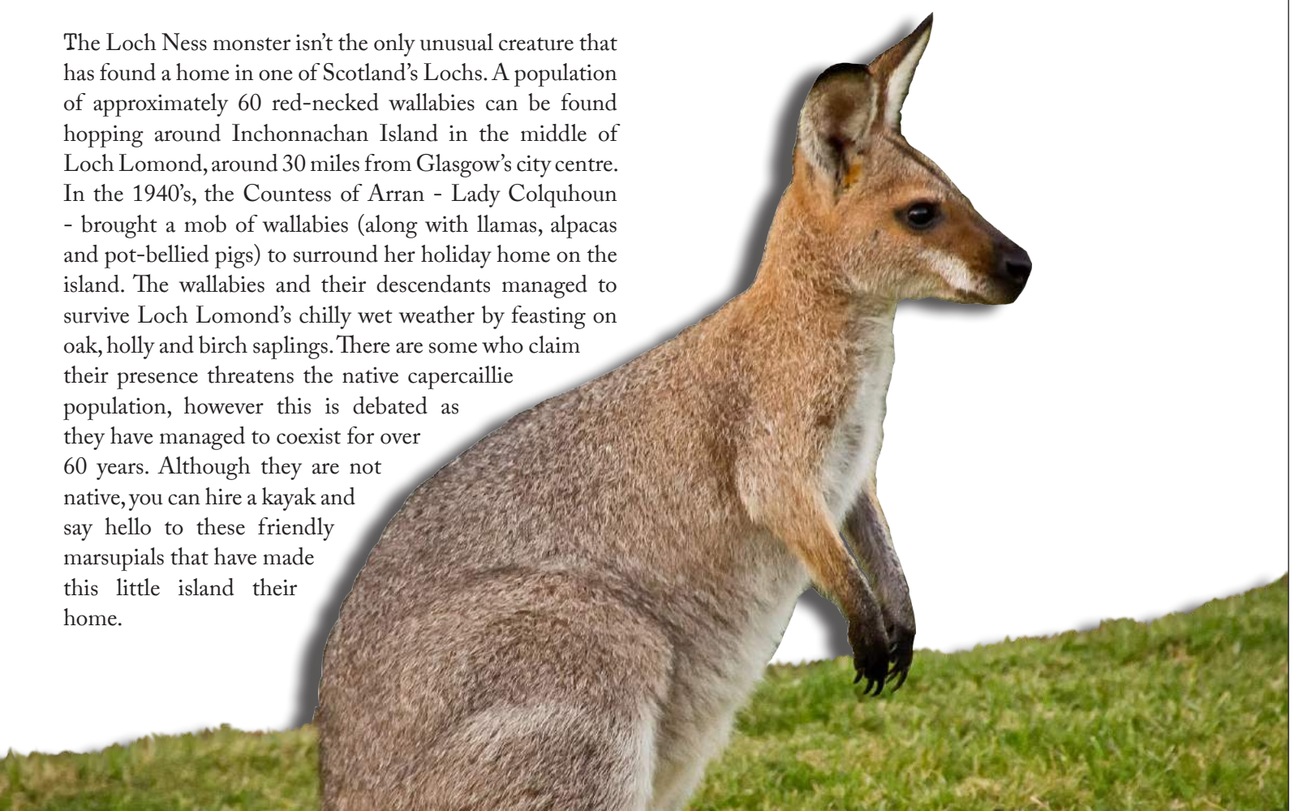
Claire Stewart

1) SEAHORSES LIVE IN THE RIVER THAMES

In the 1950's the River Thames was so polluted as a result of sewage and industrial pollution that the government declared it 'biologically dead'. Since then improvements in water quality and the restoration of degraded habitat means the river now boasts more than 125 fish species, including seahorses! Short-snouted seahorses were recorded in the Thames in 2008 - a long way from the species usual home in the Mediterranean. This is a brilliant good news story that shows conservation efforts can work to bring back biodiversity. Hopefully further improvements to water quality and habitat will encourage more species to take up residence in the River Thames.

2) WALLABIES LIVE ON AN ISLAND OF LOCH LOMOND

The Loch Ness monster isn't the only unusual creature that has found a home in one of Scotland's Lochs. A population of approximately 60 red-necked wallabies can be found hopping around Inchonnachan Island in the middle of Loch Lomond, around 30 miles from Glasgow's city centre. In the 1940's, the Countess of Arran - Lady Colquhoun - brought a mob of wallabies (along with llamas, alpacas and pot-bellied pigs) to surround her holiday home on the island. The wallabies and their descendants managed to survive Loch Lomond's chilly wet weather by feasting on oak, holly and birch saplings. There are some who claim their presence threatens the native capercaillie population, however this is debated as they have managed to coexist for over 60 years. Although they are not native, you can hire a kayak and say hello to these friendly marsupials that have made this little island their home.



3) BATS MAKE UP ONE THIRD OF BRITISH MAMMALS

Image: Copyright Bill Tyne - https://www.flickr.com/photos/-wit-/3826345059/

Ask someone to name a British mammal and I would put good money on hardly anyone naming one of Britain's 18 native bat species. Asking around the dinner table, my family named foxes, deer, hedgehogs, squirrels, rabbits and badgers as typical British mammals. No mention of Britain's smallest and most common bat species, the common pipistrelle, of which there are around 2.5 million individuals, or Britain's largest bat species, the greater mouse-eared bat, which is so rare that only a single individual is known to roost in Sussex. Unseen and unnoticed by many, every summer the countryside fills up with these nocturnal insectivores, which flutter out to feed for the night. As UK bats hibernate over winter they are likely currently sheltering in hollows, such as those in ancient trees, caves or buildings.

4) BRITAIN ONLY HAS ONE ENDEMIC VERTEBRATE

Islands are known to harbour species that are found nowhere else on Earth. Unconnected to larger landmasses, species on islands evolve in isolation, which allows entirely new characteristics and unusual adaptations to emerge. For example, approximately 90% of Madagascar's flora and fauna are endemic. This makes Britain highly unusual as our magnificent island is home to only a single endemic species - the Scottish crossbill. Britain's lack of endemic species is mostly down to the last Ice Age as it wiped out many species, as well as former land-bridges which enabled species from the continent to recolonise Britain following glaciations. Found in the Caledonian Forest of Scotland, a trip to see the Scottish crossbill's curiously overlapped beak should not be missed.

Image: Jake Gearty

REWILDING:

Our relationship with nature

Is rewilding the key to a better relationship with nature for the UK? Joanne Trewern investigates.

Us Brits are often guilty of viewing nature as something majestic, wild, and above all distant - reserved for far flung corners of the Earth, such as South Africa and the islands of Indonesia. Whilst it is most certainly majestic and wild, it definitely isn't distant. Nature surrounds us all, and we are simply never apart from it - the crafty urban fox, perfectly adapted to life in human-dominated landscapes; the busy bumblebee, pollinating our garden flowers so we may enjoy them year after year; and the shy robin, who welcomes us blissfully to the new day from outside our windows with its uplifting song.

Unfortunately, these aspects of our natural world are all too common for many, and are thus regarded as somehow inferior and less impressive than the giraffes of Africa and the orangutans of Borneo. It seems that familiarity really can breed contempt. This has resulted in our strange relationship with nature, where we donate to the cause of protecting nature in faraway lands, but are rather disdainful of our own paradise and its creatures. Instead short-term economic, agricultural and urban development goals are prioritised.

However, all is not lost as times are changing! Our newest generations are rapidly becoming more involved in the conservation of British nature, through organisations like The British Trust for Ornithology, The Wildlife Trusts, and groups such as Next Generation Birders and A Focus on Nature. These organisations play an important role in remedying our disconnected from nature, by inspiring confidence, optimism and a can-do attitude in young people interested in nature conservation, as well as creating an atmosphere of community and pride, which is lacking arguably not just within conservation but within our society as a whole.

There has perhaps never been a better time to change our view of nature, and to restore pride in every aspect of it, however big or small, and this can be achieved through rewilding. Rewilding refers to the restoration of ecological processes in a landscape damaged by intensive management, for example by agriculture or urban development, making it 'wild' again by introducing lost native species, such as beaver, golden eagle and wolf. These reintroductions, which restore trophic cascades and influence herbivore numbers, lead to an abundance of insects, plants, birds and mammals, many of which are in decline, and an increase in natural habitats such as woodland, much of which is currently under threat or being lost.

Furthermore, rewilding can help us adapt to and mitigate the effects of climate change. Through actions such as the re-vegetation of moors (tree planting), and restoration of upland water storage areas, the risk of flooding can be greatly reduced. This therefore benefits local communities as well as the wider economy. It also creates new opportunities for communities to manage their own land and learn about effective land management, increasing their sense of ownership and pride in their local area.

The power to shape the future is in the hands of this generation. The natural environment is relying on us to change our current habits and the way we manage our land so it better serves nature, of which we are but a small part. Although a fact often overlooked in favour of short-term economic gains, policies and management plans beneficial to nature are also beneficial to us in the long-term, and should therefore be made a priority. To ensure a bright green future it is vital for us to learn to appreciate all that we have, and to fight for the environment so it can continue to grow even bigger, better, and wilder. After all, it would be hard to overlook or be unimpressed by 'our' nature if it is restored to its full magnificence for the enjoyment and benefit of all.

SPECIES FOCUS:

RED FOX

A shadowed glimpse of russet. A flash and a flick of snow-white brush. A lazy saunter round the red brickwork corner of a house at the end of your street. Captivated? You've just spotted the lithe form of Britain's largest carnivore.

Urban adaptation

Red foxes are often portrayed as cunning creatures, and this can certainly be seen to be true in the way they have adapted to thrive in modern Britain. Remarkably resourceful, the red fox is able to feed on a variety of fare- from small rodents such as field mice, voles and rabbits to discarded scraps, carrion and dog food. Their ability to scavenge means they can co-exist in urban areas alongside humans with relative peace. Some have even adapted their sleeping habits- the 14% of the UK red fox population resident in urban areas are mainly nocturnal, as opposed to their rural neighbours who are crepuscular.

Sharp senses

Foxes have a keen sense of smell and acute hearing. They can hear low-frequency sounds incredibly well, picking up the tiny vibrations of scuttling rodents from metres away with pinpoint accuracy. Wherever they live, foxes need to have excellent night vision, and they achieve this with their specially adapted eyes- which have vertically slit pupils and are similar in shape and appearance to those of a cat. Red fox eyes have an extra layer called the tapetum lucidum, which reflects light back through the eye and doubles the strength of the image the fox sees. Not only this, but their sight is binocular and reacts mainly to movement, making the fox an agile and skilled hunter.

Words: Alysia Schuetzle | Image: Oscar Dewhurst

Find a fox

The easiest way to discover a fox is to use your own keen sense of smell. Red foxes have a very distinct, musky odour which is produced by a gland under the tail and sprayed to mark territory, food, and to attract mates. Droppings share this characteristic smell and are around 5-10cm long and tapered, often containing small bones from recent feeds.

You might hear a fox during twilight or at night- red foxes have around 28 different calls and are most likely to be heard from late December, when the mating season starts. Males can be identified through their abrupt, sharp territorial barking and vixens by their eerie, high-pitched screams.

THE BADGER CULL

Where are we now?

Georgia Locock

Images: James Common

Up until around the 1950s, bovine TB was a major problem in UK cattle populations, but the introduction of a TB eradication scheme quickly brought this under control. By the mid 1970s incidences of bovine TB in cattle had steadily fallen. However, in 1971 the first infected badger was discovered in Gloucestershire. So began the badger blame game that continues today.

Following this incident began Britain's first official badger culling programme. Initially this involved the gassing of badger's setts, but trapping and shooting soon replaced this method after scientific findings revealed gassing did not result in a quick and painless death. At the time there was no reliable data available about whether badgers were spreading bovine TB. It wasn't until 1998 that the government undertook a proper scientific trial to establish whether badgers were responsible and whether culling them would help reduce incidences. This was the Randomised Badger Culling Trial that began in 1998, the results of which were published in 2007.

Professor Lord Krebs, the government's adviser responsible for the review, stated that the results of the trial showed that culling was 'not an effective policy' and would be a mistake. The trial concluded that culling intensively for at least four years would reduce TB in cattle, but only by 12-16%. As a result, Krebs said the better option would be to develop a vaccine in the long-term, and in the short-term, use better biosecurity measures to prevent cattle from coming into contact with badgers and other sources of the disease, including preventing cattle from passing it to each other.

In 2010, the Welsh assembly gave the go-ahead to cull 1,500 badgers in South West Wales. However before any culling took place, The Badger Trust won a legal challenge to stop it. Instead, they began a vaccination programme in TB hotspot areas, tightened biosecurity measures and introduced more frequent cattle testing, measures similar to those that Lord Krebs advised. Despite persistent lobbying from NFU Cymru and the British Veterinary Association (BVA), the number of cattle slaughtered due to bovine TB fell from 11,671 in 2009 to 6,102 in 2013; a 48% decrease.

In October 2016, the Welsh Government announced a 'refreshed' policy on bovine TB. This mentioned using a method known as Test, Vaccinate or Remove (TVR), which includes trapping badgers living on farms with high bovine TB rates and testing them. Only infected animals are then put down. A five year research project into TVR is currently taking place in Northern Ireland. The project is designed to study whether a wildlife intervention strategy can be a potential

means of controlling bovine TB in wildlife. However, a badger cull, similar to the one happening in England, has recently been added to the package of measures proposed to eradicate the disease in Northern Ireland.

As the pushing and shoving for a badger cull in Northern Ireland and Wales continues, have farmers in England really got what they want?
In 2014 over 32,000 cattle were slaughtered after reacting to TB testing. Bovine TB is a terrible disease which needs to be dealt with; but the culling of badgers is simply a placebo given to farmers, with no benefit to them in the slightest. It's only making matters worse.

The Coalition government's four year trial cull began in 2013. It was originally meant to begin in 2012 but was delayed. Owen Paterson, Secretary of State for DEFRA at the time, blamed the delay on multiple reasons including the rainy summer weather, time-consuming legal challenges to the cull and the Olympics. The real reasons were lack of planning and understanding of the areas they planned to roll out the cull in and the uproar created by their decision.
Twice as many badgers were found in the zones planned for culling in Gloucestershire and Somerset. To get any sort of result within the six week time frame, the number of badgers killed would need to be equivalent to a 70% reduction in their population in an area. However, according to the Krebs trial which the government partly bases their policy on, this could only result in an overall reduction of bovine TB in cattle by 12-16%. The plan is wholly unrealistic. This has been illustrated by the government's missed targets throughout the four years of culling so far. Therefore bovine TB is not likely to significantly decrease.

Another major issue for Paterson and his team were widespread protests. The campaign against the cull is the largest of its kind that the UK has ever seen. Individuals from all walks of life have stood up against the slaughter. Back in 2012, a petition with over 160,000 signatures was handed into Parliament and a last minute legal challenge was launched by The Badger Trust. The icing on the cake for Paterson however, was that his own scientists began turning away from the policy, including the Government Chief Scientific Adviser, Professor Sir John Beddington.

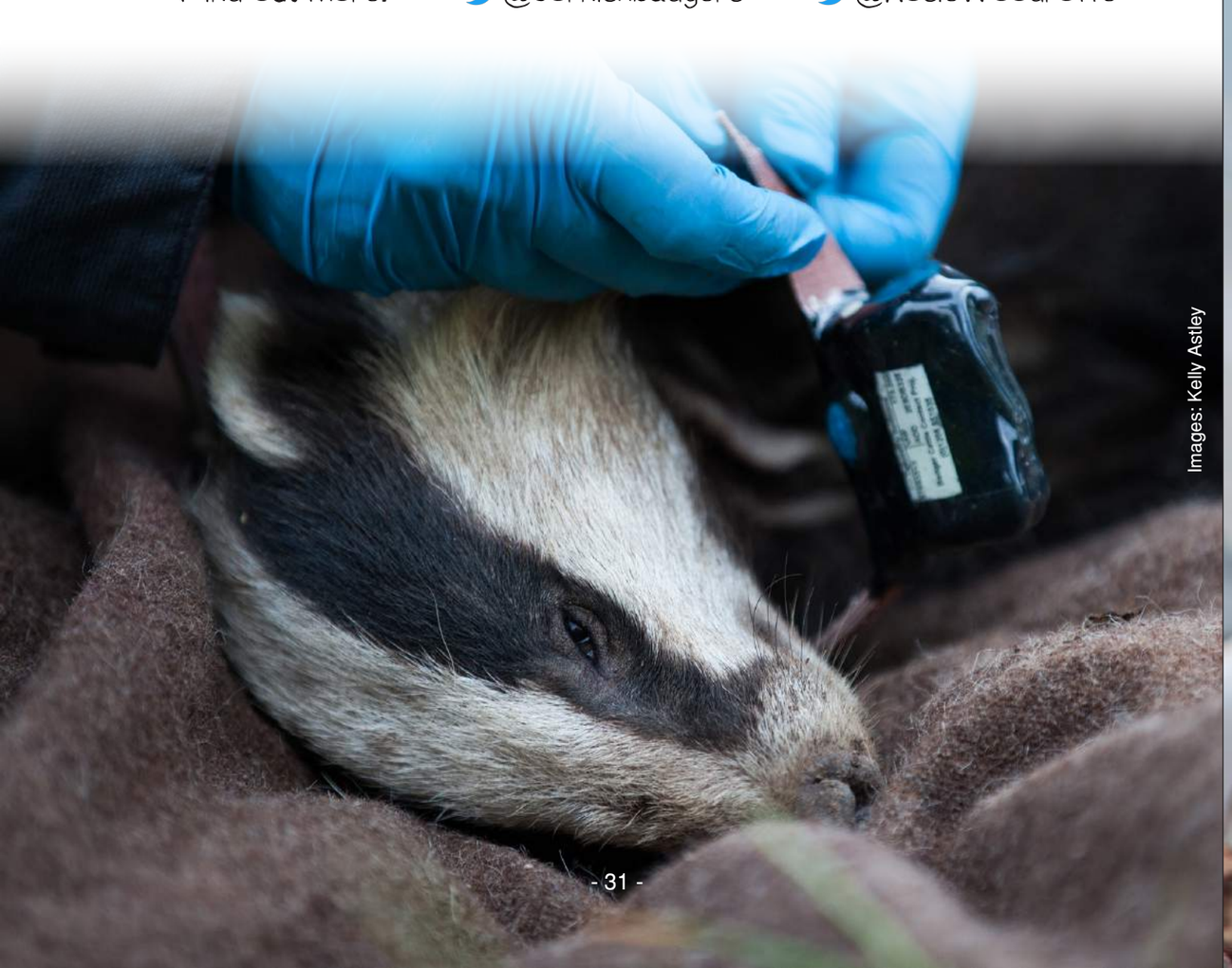
After the first year of culling, Paterson got the boot and Liz Truss took over as the Secretary of State for DEFRA. Findings from the 2013 cull showed that the first year of pilot culls were neither effective nor humane, and it was extremely likely that between 7.4% and 22.8% of badgers were still alive after five minutes of being shot. The Government responded by disbanding the independent expert panel in charge. Nevertheless, culling continued for the next 3 years. In 2015, the cull was expanded and the following year, restrictions were relaxed and the cull was rolled into a further five zones. Currently, 14,802 badgers have been needlessly slaughtered, costing the taxpayer more than £30 million.

The badger is a wonderful species that has lived amongst the British landscape for over a quarter of a million years. Their unfair role as a placebo for farmers is a result of man's arrogance and blind stupidity.

Kelly Astley of the Cornish Badger Project says:

"The Cornish badger project is run by the Zoological Society of London under Professor Rosie Woodroffe. The main body of our work is currently focusing on the environment. Previous research shows that the environment plays an important role in the transmission of bovine TB between cattle and wildlife. Close contact between badgers and cattle is extremely uncommon, suggesting that direct transmission is unlikely, so we are working with farmers, sampling the farm environment to better understand how transmission may occur. We are obviously keeping an eye on our study badgers, GPS collaring to monitor movement, assessing health, infection status and social groups. We hope to be able to continue with our vaccination project soon but a worldwide shortage of the BCG vaccine has unfortunately meant that we have had to put this important part of our work on hold."

Find out more: @cornishbadgers @RosieWoodroffe



Images: Kelly Astley

PLANET EARTH II:

HELP OR HINDRANCE?

Planet Earth II aired towards the end of last year on the BBC and was watched by over 10 million people. Sir David Attenborough narrated this extraordinary nature documentary series, which dazzled us with astonishing wildlife such as the enchanting sand mole, the chinstrap penguins who fought the oceans around Zavodovski Island; and of course who could forget- the dramatic escape of the marine iguana from the coils of racer snakes.

Praised for its breath-taking photography, like the amazing camera trap footage of the snow leopards, and its incredible music composed by Hans Zimmer, it is no wonder that more 'youngsters' watched Planet Earth II than The X Factor final. Viewers were captivated by the animals on screen, and became emotionally attached to the wildlife in the unfolding drama, especially during the 'Cities' episodes when we learnt about the heartbreaking story of the hatchling turtles disorientated by the bright lights of the city. It could be suggested that this should be enough to spur people on to contribute towards nature conservation, but many viewers were quick to criticise the documentary series, suggesting there needed to have been a greater element of conservation throughout, and that the real state of nature and the struggles it is facing should have been shown. The wildlife TV presenter Martin Hughes-Games was one of these people.

Martin's article for The Guardian, titled 'The BBC's Planet Earth II did not help the natural world', soon became a hotly debated topic. He stated that he thought the series was "a disaster for the world's wildlife", and that it would contribute to the extinction of species on the planet. He suggested that the series makes people think we are living in a fantasy world, when in fact reserves are decreasing in size, but the animals are still being filmed. Martin's opinions reflected what some people were thinking, although others disagreed. →

"Planet Earth II is amazing. But it does not do everything within its power to encourage a home for all life on our planet."

Rebecca Broad

Back in November, Mike Gunton and Tom Crowley (Executive Producer and Assistant Producer/Cameraman for Planet Earth 2) appeared on BBC Radio 5 Live's feature "Your Call: Planet Earth 2 – how does it make you feel?"

Presenter Rachel Burden asked them, "But is that a stated intention of the show? To get people to think, to get people to act?"

Mike answers, "That's a personal thing, for me – I don't think… you know, television's an incredibly powerful medium and I think, we, we have to, erm… we have to effectively develop a sort of portfolio of projects. I think it's, you know, we've tried this over the years, I think it always ends up being a bit of a mess if you try and muddle up too many ideas."

With even the Executive Producer unable to say whether the series is meant to inspire any action, an opinion article like Martin Hughes-Games' was overdue.

Let me get some disclaimers in. Planet Earth 2 is incredible, both visually, and audibly. I loved every second, as did millions of others. It won't make me popular to criticise it (indeed, Martin Hughes-Games recently pointed to some of the abuse he has received for doing so), but I believe any huge project – and huge it was, shooting for over 2000 days – should be analysed, especially when mainly funded by licence payers. Particularly when the subject is wildlife, which is in devastating decline.

Back to Martin's article. He describes Planet Earth 2 as "still made as if this worldwide mass extinction is simply not happening". I don't remember more than an occasional sideline about a species' plight. Planet Earth 2 is, as Martin wrote, "escapist wildlife fantasy". Escapism is a luxury – one that so much of this Earth's wildlife doesn't have.

But surely beautiful, escapist filming inspires people to act? I hope with all my heart it does. However, research shows that keeping things all smiles isn't necessarily the best way. Brugger (2013) found that greater negative feelings were positively linked to a greater willingness to take action against climate change. The BBC does such great work critically investigating issues in programmes like Panorama – why not in Planet Earth 2?

Sir David Attenborough's final plea, in episode 6, is moving, inspiring, and… vague. I think of everyone who shared his message – from celebrities, to friends who hated learning about wildlife in school – and want to smack my forehead with frustration. Just one phrase about donating to charity, signing a petition, or advocating sustainable products could've made a humungous difference. But there is nothing so specific - a missed opportunity.

This is reflected on social media. The top 10 hashtags (analysed by hashtagify.me) related to #PlanetEarth2 include #Mountains and #David Attenborough, but nothing on extinction or conservation. Of the 32 tweets by @BBCEarth on the final episode's broadcast date, not one mentions the C word. The closest they get is, "These hawksbill turtles have been unable to adapt to the urban environment", which almost sounds like they're blaming the hatchlings for their inadequacy. They did give the Barbados Sea Turtle Project a shout out just before 9pm – nice. But with a reach of thousands, couldn't they have done better? Perhaps a call to action? A plea for donations?

As Sir David Attenborough says in his final words, "It's surely our responsibility to do everything within our power to create a planet that provides a home not just for us, but for all life on Earth." Planet Earth 2 is amazing. But it does not do everything within its power to encourage a home for all life on our planet.

"In a world where people's connection to the natural world is diminishing, we should celebrate programmes like Planet Earth II.."

Simon Phelps

I've been given the seemingly easy task of defending Planet Earth 2; a BBC wildlife documentary series watched by over 12 million people and narrated by a British icon in Sir David Attenborough. Need I say more? In the face of such strong criticism from Martin Hughes-Games in his Guardian article, not everyone agrees and an examination of the issues is warranted. Martin brands Planet Earth 2 "a significant contributor to the planet-wide extinction of wildlife" due to the rosy image it paints of the modern world. It is this sensationalist accusation that I believe harms the serious point being made. The issue of how best to engage people with nature and encourage them to take action is a serious one, which merits thorough investigation and a balanced critique. In making such a polarising statement, I believe that Martin has harmed the points he was trying to make and unwittingly given into pressure to make eye-catching statements in order to get your voice heard.

Martin labels Planet Earth 2 as "escapist wildlife fantasy", and I would ask what is wrong with this? We all need to escape the monotony of the daily grind, and if this is through the lens of wildlife then all the better. Why shouldn't people escape into the world of swimming sloths and friendly hyenas than into the vapid, corporate, popularity contest of the X Factor (incidentally, more young people watched the first three episodes of Planet Earth 2 than the X Factor). In a world where people's connection to the natural world is diminishing, we should celebrate programmes like Planet Earth 2 that manage to fightback against this marginalisation and keep nature in the spotlight.

The underlying thrust of Martin's article is the issue of how best to encourage people to take action for our declining wildlife. He feels that the 'escapist' beauty of Planet Earth 2 does not motivate people to take action, as it does not tell the right stories of species decline and habitat destruction. Yet I would ask you, what motivates and inspires you the most; positivity or negativity? There is evidence to show (see the Common Cause for Nature report) that strongly negative messages can make us feel helpless, and that simply presenting the facts of species decline is not enough to motivate people to take action. Humans are not rational, fact-processing beings, we act on emotions and values, and these need to be understood in order to create behavioural change. Presenting an inspiring vision and engaging people with a hopeful message, might be the best way to try and encourage people to care about wildlife, and eventually to take action.

More effort is needed to convert inspiration into action, and on this point I agree with Martin. In terms of engagement, encouraging behavioural change is the hardest thing to do. This issue is not unique to the world of conservation, it faces all those trying to ensure people live more moral and ethical lives. The media, particularly the BBC, are an extremely powerful force and it would be advantageous to have their support. Much of the conservation work around the world is performed by charities, who often struggle to cope under an increasing demand for their services and a decreasing supply of funds. There is considerable scope for the media to support this work, helping to spread conservation messages and pushing people to take the action that the conservation world so desperately needs. Imagine the impact a wildlife-themed Comic Relief style (which raised more than £78 million in 2015) TV event could make, raising much needed funds for conservation around the world and showing people other ways they can take action for wildlife.

I am pleased that Martin has raised this issue, I just wish he had done so in a more mature, balanced and less sensationalist way. Had he done so, we might have more productive discussions about engagement and less outraged reactions to unfair criticism. Moving forward, we should acknowledge the role that inspirational shows like Planet Earth 2 play in engaging people with nature, whilst looking at how we can turn the wonder it provokes into meaningful action that saves our beloved wildlife.

JOB FOCUS

This month, Amy Challis talks to us about being a Scottish Raptor Monitoring Coordinator.

Hi Amy, tell us a little bit about your role:

I work as Scottish Raptor Monitoring Coordinator for the Scottish Raptor Monitoring Scheme (SRMS), which is a partnership of eight organisations working together to benefit raptor conservation. You can find out more about the Scottish Raptor Monitoring Scheme on our website http://raptormonitoring.org/. I am responsible for the day-to-day running of the scheme and driving the work of the scheme forward. My responsibilities are varied and include ensuring the secure storage and efficient flow of SRMS data, producing the SRMS annual report and regular newsletter, acting as the main point of contact for all raptor monitoring volunteers and organisations with an interest in raptors in Scotland, developing and maintaining the SRMS website and developing and piloting a new survey to increase participation in raptor monitoring.

What does a usual day entail?

My day is typically spent at my computer and my activities will vary depending on the time of year. At the end of each breeding season almost all the raptor monitoring data collected in Scotland (more than 6000 records from our dedicated volunteer network of around 300 volunteers monitoring raptors all across Scotland) will arrive in my inbox. All these data need collating and checking before they can be absorbed into the SRMS's master data repository and analysed for the SRMS report. When I'm not at my desk I may well be in a meeting, delivering a training event or maybe even out doing a spot of raptor monitoring myself.

What skill set is required for a role such as this?

You need a diverse skill set for a role such as this. Probably the most important are the need to be objective (to be able to stay focussed on delivering the agreed work programme on behalf of the partnership), to be organised and to be a good communicator (there are eight partner organisations to keep in touch with not to mention the existing and potential new raptor workers). Having excellent data management skills and experience of GIS (mapping software) to be able to collate and analyse the SRMS data is also essential.

How did you get into this role?

I have been working in my current role since June 2014, so about 2.5 years. My career in conservation started with an undergraduate degree in Environmental Sciences at the University of East Anglia which was directly followed by a PhD at the University of Stirling in 2007. Following my PhD research I worked for the RSPB in various roles for nearly seven years in Northern England (Assistant Conservation Officer), Scotland (Conservation Officer) and most recently Wales (Data Manager).

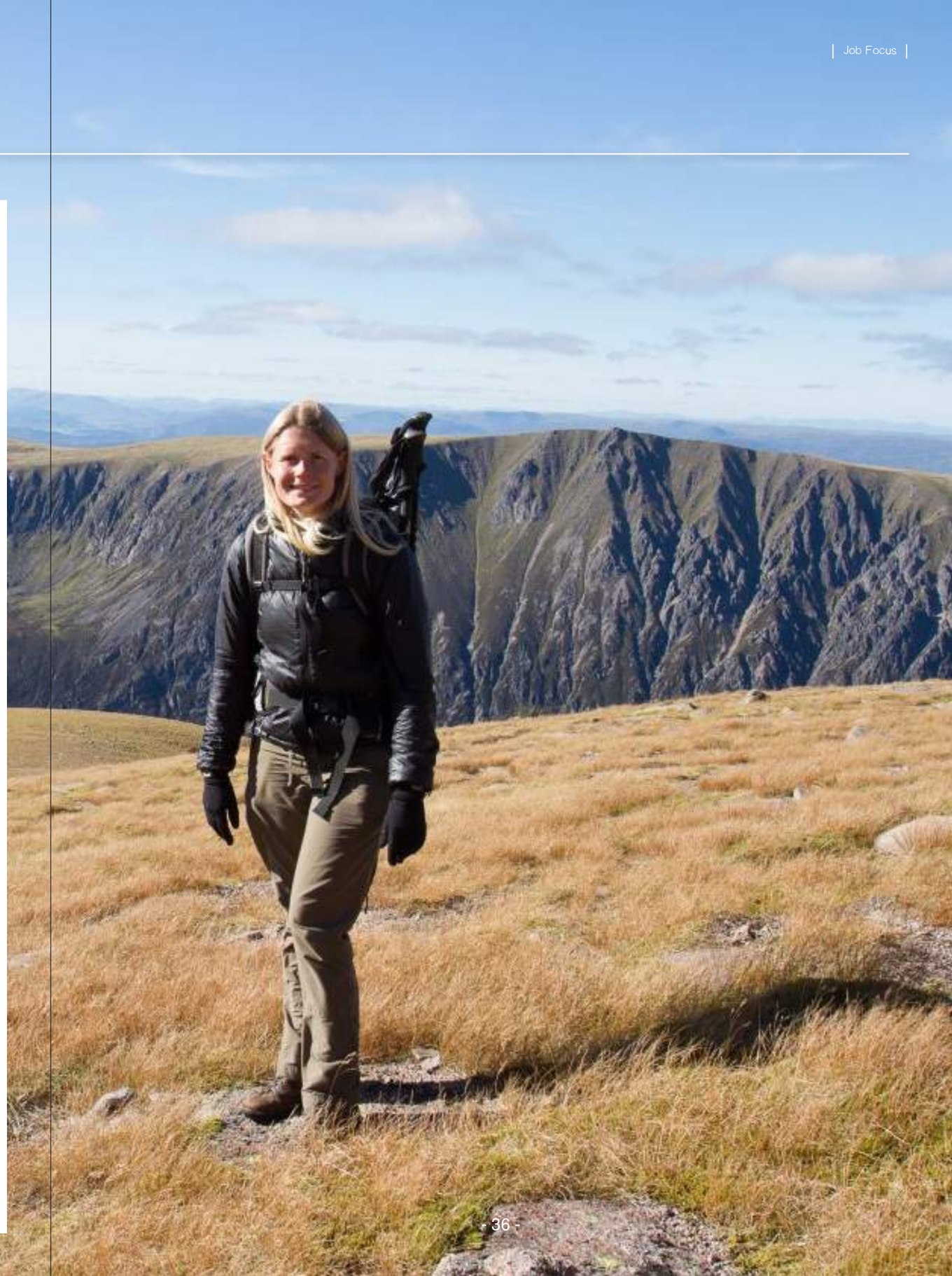
When the opportunity came to return for a job in conservation in Scotland, I jumped at it. As with all jobs it does have its frustrations, but for me it has brought together a combination of the best bits from my previous jobs to allow me to work for a partnership of organisations that are committed to delivering for raptors in Scotland.

What recommendations would you make to someone interested in a similar role?

As mentioned my role is very diverse so taking opportunities to gain a breadth of skills and experience is really important. My initial journey into nature conservation was through the academic route (degree and then PhD) which set me off on the right track for starting to assimilate the skills that I then built on through a succession of jobs in the conservation sector.

Thanks, Amy!

Let our readers know about your job in conservation. Contact us at: editorial.newnature@gmail.com



CAN JACKDAWS COUNT?

Jenny Coombes investigates the mental capabilities of Cornish corvidae.

Many of us are aware of large numbers of animals of the same species coming together to form huge groups. Flocks of birds, you might think of huge starling murmurations, and shoals of fish are perhaps some of the most famous examples and can create amazingly coordinated patterns in the sky or ocean. These highly synchronous animal groups create what is called a collective behaviour. This is formed by each individual, of the sometimes thousands in the group, following simple rules:

1) Don't get too close to others.

2) Don't get too far apart.

3) Travel in the same direction as others in the group.

We know that collective behaviours are maintained using simple rules as mentioned above, but we don't know how they are initiated. How do our examples of a starling murmuration or a fish shoal emerge in the first place? Furthermore, the three rules given above don't take into account differences between individuals such as age, sex or motivation. An animal that is hungry or pregnant may have different priorities to others when considering whether to join a collective behaviour.

Mob Mentality

A particular example of a collective animal behaviour that I investigated for my Masters through research is a mobbing event. Mobbing is the joint assault of animals on a predator to drive it from the area and commonly occurs in birds. A mob is usually initiated by alarm calls, produced by an individual who first spots the predator and these calls then recruit others to join the mob.

My research investigated what initiates mobbing behaviour in wild jackdaws, the smallest member of the crow family. My question: does the number of individuals producing recruiting alarm calls influence how many individuals are calling.

The Experiments

I undertook my experiments at two field sites in West Cornwall, as part of the Cornish Jackdaw Project. I recorded the alarm calls of jackdaws using a microphone and then after arranging these calls into playable tracks, I broadcast these tracks to the two jackdaw colonies using remote-controlled speakers. The jackdaws responded to the electronic alarm calls

jackdaws join in with the mob? Many factors may influence the number of jackdaws that join but as there is safety in numbers I predicted that a large mobbing group would be important to potential recruits. And because of this, recruits may be able to tell how many as they would live calls and I recorded how many jackdaws responded in each of three experiments. The first experiment had just a single bird's alarm calls, the second had three birds calling and the last had five birds calling.

The Result

My result - jackdaws can count!

The more callers I played to the jackdaws, the more individuals were recruited and joined the mob that was produced. Jackdaws can therefore tell that each of my three experiments had a different number of callers. My results showed the first evidence for the use of 'numerical assessment' (judging the number of something) in a collective antipredator behaviour.

It is important for the jackdaws to be able to tell how many individuals there are in the mobbing group as individuals are at greater risk from a predator when in a small group. If there is just a single individual announcing a danger, others may judge the risk to themselves to be too great and not join in. A larger number of individuals announcing a danger may be more favourable to join, as the risk to each animal is lower. The decreasing risk to an individual with an increasing group size is called the dilution effect.

So, jackdaws can tell the difference between one caller and five callers- but interestingly, I found that they cannot seem to distinguish between three and five callers. There may be a few reasons for this. Firstly, there may be no further benefit to the jackdaws in assessing the number of callers above three; a threat is a threat no matter how many individuals are shouting about it! Secondly, my experiment set up may have made it difficult for the jackdaws to distinguish between the last two experiments. The ratio between one and five is much larger, and thus possibly easier to discriminate, than that between three and five.

Research such as this is important for understanding the mental capabilities of jackdaws in particular, but can also be extended to other species. In allowing us to understand the animals that live around us, we can strive to protect them and the environment they inhabit.

For more information on the Cornish Jackdaw Project:

www.wildcognitionresearch.com

@CornishJackdaws

Identification Trainers for the Future

Stephanie West

Identification Trainers for the Future is a Heritage Lottery Fund project being run by the Natural History Museum in partnership with the Field Studies Council and National Biodiversity Network Trust. As the project is coming towards the start of its third year, many of you may have heard of it by now. At the heart of the project is a programme of 12 month long work-based traineeships, an unrivalled opportunity for 15 passionate early career natural historians to work with the Museum and build their skills both in UK natural history and communication. But why is it necessary?

I have personally been extremely fortunate in how my career has progressed. Over the last 16 years (how did that happen) I have followed a career path through the UK biodiversity sector which has enabled me to work either for or with every conceivable strand of our industry. During that time I have seen many new people come into the sector and what I've seen is a real change in new entrant's knowledge of the basis of everything we do – the ability to identify species, whether at 16 and just starting a National Diploma, or in their 20's and starting their first job. And it's not just me. In 2011 the Chartered Institute for Ecology and Environmental Management produced a report called 'The Skills Gap' which highlighted the decline in taxonomic knowledge in the professional sector. In 2008 the House of Lords Science and Taxonomy Select Committee identified that taxonomic skills for UK species, particularly those of the 'cryptic' or harder to identify species groups was in decline, precisely at a time when "the environmental imperatives increasingly manifest in our daily lives". But where does this come from? It's easy to say 'well, young people are disengaged from nature, they're just not interested', but that statement is, in my opinion, a lie. Or at least a fallacy that is all too easy to be persuaded by because it's simple and also has the convenient benefit of giving us, who were there before you, the opportunity to blame you as young naturalists for it and not ourselves. What I see through talking to students and young people, through listening to AFON and from seeing the almost instantaneous success of this magazine is far from that. What I see is a cry for opportunity. There are few courses, degree or otherwise, now which teach students how to develop their identification skills. And this is the crux of it. Identification knowledge itself cannot be taught. Knowledge is only developed through experience, and experience itself requires three things; opportunity, time, and knowing where on earth to start. Knowing where to start is the bit that can and must be shared through education, training and mentoring. Having those fundamental skills in how to use a field guide, what and how to record (including of course how and why to share your records), and the principles of what you need to know to start to identify a new group is the basic toolkit that a young naturalist needs to be given and it is down to those of us with experience to make sure we are doing this at every opportunity.

Identification Trainers for the Future is the staff at the Museum, in combination with our partners, taking that opportunity. The true advantage that we have had through running this programme for our trainees is near complete autonomy to work out a new method of sharing the experience of staff at the Museum. This means that we've been able to develop a radical new programme which actually provides those three elements to our trainees – the toolkit for how to start to identify those difficult species groups, the opportunity to get that information, network and work with some of the best taxonomists and ecologists in the field, and the time (through the trainees stipend) to start that long journey of practicing.

But what can we learn from doing it? Does this matter for anyone beyond our group of 15 trainees? Well yes, I hope so. I hope that the model that we have created here can be used as a case study for how to do things differently. The creation of a different mechanism of how to engage, encourage and enthuse bright, passionate entrants into the field of natural history, and of how to reconnect experts with those just starting out on their journey to expertise is hopefully one that others will see the value of and we hope to be publishing and discussing more on that over the next year or so. With our applications for the five positions each year numbering in the hundreds we know that there is a market out there for non-academic training at this level. With our entire first cohort of five trainees now out working and engaged in the sector, and job offers now coming through for our second group too, we know that our trainees are extremely competitive so we must be doing something right, and we hope that through the project we can inspire and engage not just new naturalists, but some of the 'old guard' to do something different too.

OUR CONTRIBUTORS

Rebecca Broad

Becca is a part-time Biology student, part-time freelance content creator, and full-time dog coveter. She can be found on Twitter, or in her pyjamas eating some strange vegan snack.

@BeccaLaBee

Jenny Coombes

Jenny studied her Masters by Research at the University of Exeter's Cornwall Campus in 2016. In January 2017, she began a PhD on cognition in great tits at University College Cork in Ireland.

@JayCee_161

Tiffany Francis

Tiffany is a writer from rural Hampshire where she works on an educational farm. In 2016 she completed her Masters in English from UCL, and is now writing her first book on foraging with Bloomsbury.

@tiffins11
www.tiffanyimogen.com

Bobby Gant

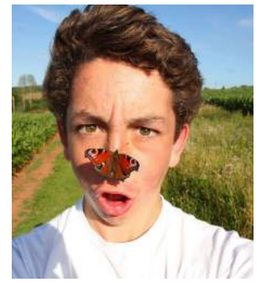
Bobby has a degree in journalism and has had articles, poems, short stories and reviews published by a variety of publications and websites. Bobby currently resides in West Yorkshire and works in adult education.

@bobby_gant

Fabian Harrison

Fabian is a 17 year old volunteer for the RSPB and aspiring wildlife photographer living in Norfolk. For more of his writings and pictures you can visit his website.

@Fabian_Harrison
www.fabianharrison.com



Will Langdon

Will is a 19 year old from West Somerset with a particular interest in butterflies and their ecology. Studying Biology at Oxford, he is also a trainee bird ringer, and avid moth trapper.

@WillLangdon12
www.mothsandmusings.blogspot.co.uk

Georgia Locock

Georgia is a young naturalist and blogger. She particularly enjoys using trail cameras to capture footage of nocturnal wildlife, birding, campaigning and sharing her fascination with natural world.

@GeorgiaLocock
www.georgiaswildlifewatch.com

Dara McAnulty

Dara McAnulty is a 12 year old aspiring naturalist, scientist and blogger/nature writer. He is the author of Young Fermanagh Naturalist, a blog which focuses on wildlife, conservation and his passion and love for nature.

@naturalistdara
www.youngfermanaghnaturalist.wordpress.com

James Miller

James is a 15 year old wildlife enthusiast from Surrey, who loves to promote nature through photography, filming, presenting and blogging. Nocturnal wildlife is a particular favourite of his.

@JamesNaturalist
www.kneedeepinnature.co.uk

Simon Phelps

Simon is a conservationist, naturalist, photographer and writer. He works for Butterfly Conservation on their All the Moor Butterflies project, conserving Fritillary species in the south-west.

@wildlifephelps
www.wildlifephelps.com

Gus Routledge

Birds, ecology, botany, mammals, mosses, bugs, conservation, blogger, naturalist. On an internship with SNH at Loch Leven NNR.

@PinkfootedGus
www.birdingwithgus.wordpress.com

Claire Stewart

Claire graduated with an MSc. in Conservation Science from the University of Queensland & B.Sc. in Zoology from the University of St Andrews. She recently moved back to Scotland and is happy to have squirrels back in her life.

@clairecology

Joanna Trewern

With an MSc in Biodiversity, Conservation and Management from the University of Oxford, Joanna works for WWF-UK as their Earth Hour Officer. She is also a science communicator and wildlife rehabilitator, aiming to engage people in conservation.

@joanna_trewern
www.interdisciplinaryconservation.wordpress.com

10 REASONS TO LOVE NATURE

In celebration of Valentine's Day this month, here's why you should be falling in love with nature... and how it can love you back.

1. It has been scientifically proven that people who regularly spend time in nature feel **happier** than those who don't.
2. Getting outside means you can get your daily dose of **Vitamin D** which helps to **strengthen your bones.**
3. Researchers have found that people who spend more time in nature suffer **less stress** and are **calmer.**
4. The natural light you will experience helps to regulate your body clock, meaning **more sleep** and **boosted energy.**
5. The air inside buildings can become stale and in urban areas, congested. Getting into rural areas means the air you breathe is likely to be **fresher.**
6. Outside is where animals live. And let's face it; who doesn't feel better off after spending time around **animals?!**
7. Those who get outside more tend to enjoy **better vision** instead of people who spend a lot of time inside looking at screens.
8. It makes us **better humans**. Researchers have found that those who interact with nature more regularly tend to have more **positive relationships** thanks to the mental health benefits spending time around nature can have.
9. Doctors have found that patients who are able to spend time connecting with nature experience **faster recovery** after operations and illnesses.
10. The experiences you will have are amazing and unique – and will affect all your **senses**. Colour, sound, smell and incredible displays of behaviour, wildlife can **shock, amaze and humble** us.

New Nature

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.

editorial.newnature@gmail.com

www.newnature.co.uk

/NewNatureMag

@NewNature_Mag