New Nature

NATURE THROUGH THE EYES
OF THE NEXT GENERATION

JANUARY 2017 | Issue 1

CHRIS PACKHAM

On social media, politics and the importance of the youth nature movement.

How do birds tell the time?

Robyn Womack reveals
all on page 41.

CARIM NAHABOO

Tells New Nature about his beautiful illustration work.

New Year, New Nature

Find out more inside -

Brexit • Bearded Tits • Murmurations • Tawny Owls • Resolutions • Reviews • Swans • Starlings

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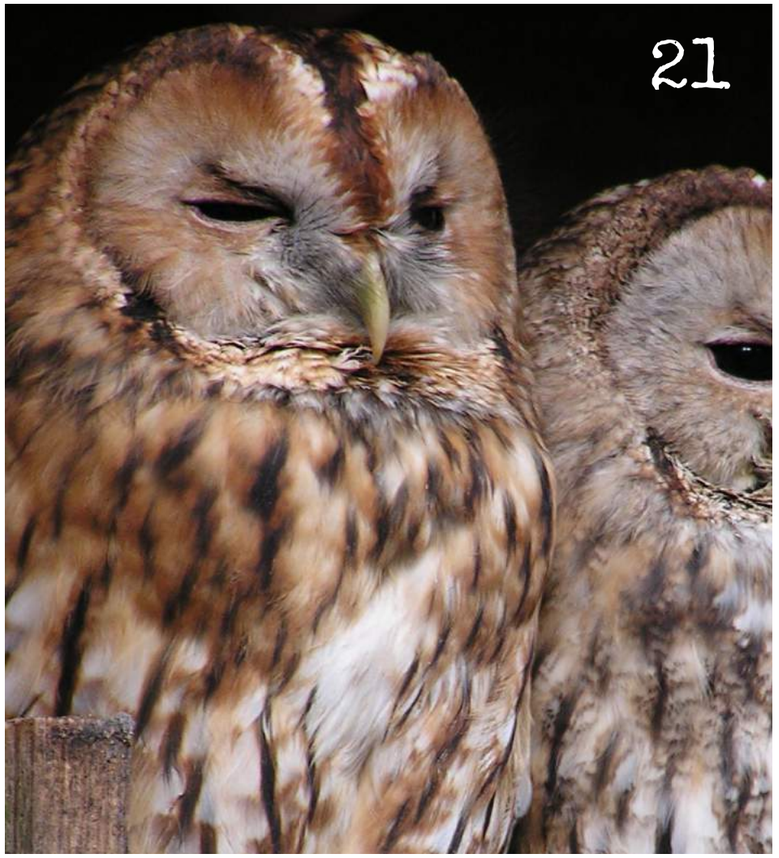

Image: Gary White

Image: Jake Gearty

On the Cover

Our beautiful cover shot this month was taken by Matthew Hazleton.

Matt is a wildlife photographer, ornithologist and marine biologist who travels throughout the UK photographing all sorts of wildlife.

Find him on Twitter: @matthazphoto and on Flickr: www.flickr.com/photos/matthazleton/

Image: Carim Nahaboo

Image: Robyn Womack

Image: Georgie Bray

WELCOME TO New Nature

Welcome to New Nature- a magazine created to help promote, showcase and aid young people passionate about nature, conservation and ecology.

For far too long now, environmentalists have lambasted the perceived lack of interest that young people hold for nature. Citing 'nature deficit disorder' and, at times, branding us lazy, detached, or both. A misconception, in truth, though one which, unfortunately, abounds in modern society. Despite the dedication of many young people.

The youth nature movement is a thing of beauty: rife with promise, potential, quirky characters and, of course, phenomenal talent. The pioneering steps taken by organisations such as A Focus On Nature now developing into a veritable tsunami of interest from across Britain. As fresh talents emerge and an increasing number of young people, from all backgrounds, poke their heads above the proverbial parapet and take a stand for the natural world. Each and all utilising their individual talents – whether in conservation, writing, speaking, art or campaigning – to better the world in which we all live. These people - the up and coming heroes in conservation, ecology, and communication - deserve a resounding applause, and recognition for their deeds and abilities. This something that the team here at New Nature now hope to provide.

With the necessary infrastructure in place, and after careful planning, we are proud to announce the launch of New Nature – the only natural history magazine written, edited, and produced entirely by the next generation. A magazine we hope to release monthly, for the foreseeable future, set to contain everything from opinion and traditional nature writing; to reviews, research summaries, trip reports and conservation news. All from the horse's mouth, so to speak, and in addition to interviews with and careers advice from prominent figures in the environmental field.

Here, in our first issue, we hope to highlight the outstanding work, dedication and talent of young people, and to offer support and guidance to the contributors themselves. Providing a place for the next generation to express their passion absent worry. We hope, through hard work and perhaps a little blind luck, to turn New Nature into a hub for young people with an interest in nature, while providing the youth nature movement with the platform it so desperately requires, both to inspire hope and to build on previous gains. As well as provisioning our readers with no end of interesting reading courtesy of young authors from across Britain. In our first ever issue you will find talk of badgers, Brexit, forestry and farming – issues that our contributors care passionately about, in addition to lighter pieces as young naturalists from up and down the country express their fondness for a specific species or place.

There will be work from well-known names and fresh faces alike, seasonal musings, interviews with our supporters and snippets from the editorial team. All broadcast, not just to give an insight into what we hope to achieve through New Nature, but to promote our authors themselves.

We sincerely hope you enjoy issue one, and if so, hope that you will help us by sharing New Nature far and wide among your connections.

The New Nature Team

Meet the team

James Common

Editor in Chief

James is a nature writer, conservationist and aspiring environmental journalist from North-East England; holding a BSc in Animal Conservation Science and studying for an MSc in Wildlife Management. He runs and contributes to a number of conservation blogs.

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Alexandra Pearce

Managing Editor

Alexandra has a background in marine science and zoo keeping. She currently resides in Cornwall and writes for a variety of magazines, NGO's and websites about British wildlife, animals and the environment. She is also a keen amateur wildlife photographer.

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Alysia Schuetzle

Creative Director

Alysia is a creative graduate from coastal Suffolk, currently living in Norfolk where she is employed as a designer and illustrator. She has been drawing and painting British wildlife since she could hold a pencil and in her spare time is a keen birder.

@ASchuetzle

Alice Johnson

Assistant Editor

Having always loved wildlife, Alice studied a degree in conservation and has been involved with various projects, including helping barn owls with The Wildlife Trust and little terns with the RSPB. She keeps a wildlife blog and writes content for The Woodland Trust.

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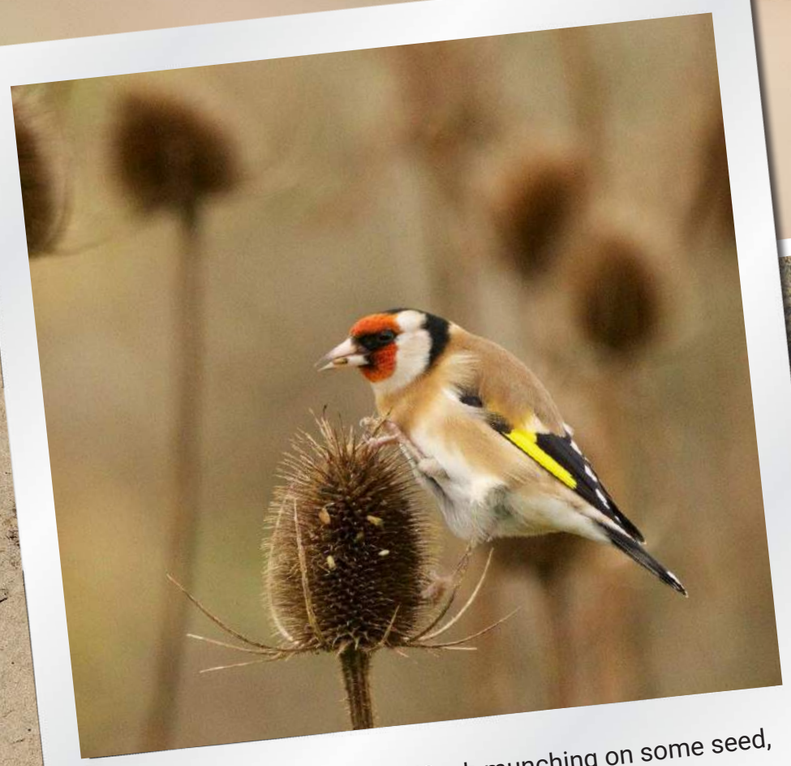
www.naturenattering.wordpress.com

DECEMBER IN PHOTOS

We have really enjoyed recieving your photo submissions from your nature adventures in December-

We love this picture of two kingfishers sharing a meal, submitted by Warren Price (@Wossa01)



Check out this stunning goldfinch munching on some seed, snapped by Jack Hicks (@jackosapien)!

This gorgeous frosty winter scene complete with muntjac deer was snapped by Joe Cartmell (@WaterVole).

Jo Hood (@Jo_birding) took this lovely shot of a bearded tit bathed in winter sunlight.

Are you a keen photographer?

Tweet us your January snaps

@NewNature_Mag

This friendly seal pup photographed by Gary White (@garybirder) on Horsey beach, Norfolk even did a wave for the camera!

WHAT TO WATCH FOR

in January

Mya Bambrick tells us why Winter is her favourite time of year, and the species we should look out for this month.

Cold weather sets in across the country, the first frosts make the ground 'crunch' as you walk along, and the winter visitors we have long awaited for come to the UK for a milder winter.

Winter is my favourite time of the year for the reason that bird numbers swell in places like harbours, estuaries and wetlands. This means it is a great time to brave the cold and go out looking for the many species of duck, geese and wader, which arrive in autumn to the UK to make the most of the milder weather and available food. This means that most of the birds you will see will be from the continent however some would have stayed in the UK all year.

One of my favourite places to visit at this time of year is RSPB Pulborough Brooks, located in West Sussex. It is home to a great variety of habitats including wetlands, woodland and heathland. A gloomy day in winter and I am there, surrounded by hundreds of Canada and greylag geese, filling the misty, cold air with a symphony of honks.

Image: Copyright North East Wildlife : www.northeastwildlife.co.uk

Wigeon

In front of the geese, on the edges of the lake, a sea of dabbling ducks lie before my eyes, wigeon, being the most numerous catch my attention. The chestnut of their head and neck contrasting with the bright green of the grass surrounding the lake, with a patch of yellow on their forehead, they must be one of my favourite ducks in the UK. Medium in size, along with chestnut hues they have a pink breast and a grey body. You are most likely to see them where they tend to gather in large numbers on wet grasslands, flood meadows, flooded gravel pits and reservoirs throughout the UK. Amongst the gloominess it is hard to define individuals as they are quite far from the hide I am sitting in, on the other side of the lake in fact. Showing off their beautiful colours, a group of around ten feed in the small pool of water directly in front of me, seeing them in detail shows that their faces have a slight 'cuteness.' The females are a duller version of the males, being dark brown and chestnut all over.

Image: Copyright North East Wildlife : www.northeastwildlife.co.uk

Teal

Feeding within the wigeon are teal, more colourful than the previous duck, but slightly smaller. A striking green eye patch, along with a chestnut head and a black-edged yellow tail, the teal is an eye-catching bird. Look for teal in large groups of wigeon as well as on wetlands. Drizzling rain starts to patter on the hide's metal roof as I decide to leave the hide and carry on along the path. Fieldfares, redwings and blackbirds gather in groups and hop along in the fields. I spot a few feasting on the ruby red berries that some of the trees have to offer as I reach Hanger View, a viewpoint which looks over the majority of the reserve. The pools and the banks of the water are full of with wigeon and teal, with a few pintail in the mix.

Suddenly a group of waders cross the grey but brightening skyline. Glistening like diamonds, twisting, turning, tumbling, they travel from side to side, flying lower and lower until they reach the relative safeness of the ground below. These brownish-grey waders are black-tailed godwits. Long-legged and beaked, with black and white stripes on their wings, these must be one of the most elegant looking waders there are. Now wading in the pools, these birds look very similar to the bar-tailed godwit however they don't have striped wings. Look out for these wonderful waders at estuaries, coastal lagoons and wetlands.

Look out for these wonderful waders at estuaries, coastal lagoons and wetlands.

A week later and I am sat on the pebbly beach of Pagham Harbour, in West Sussex, with my scope at my side. It is relatively sunny and mild for a day in winter, the sun glistens on the blue water as I am transfixed by the glorious views of a Slavonian grebe. Bobbing along, it dives, only to reappear again, this time not too far away. Pagham Harbour is one of the best sites in the UK to see Slavonian grebes, with winter being the best time to see them around UK coasts. With a piercing red eye, this black and white grebe now attempts to fly west, the water splashing as it gathers the momentum to lift into the air. It disappears in the distance. The bright white of its underside and cheeks reflect in the glinting sun as it eventually disappears off into the distance. To spot these glorious grebes scan the sea for them at sites such as Pagham Harbour, the Moray Firth and the Clyde Estuary. However try not to confuse them with the very similar, less common, black-necked grebe which are mainly found in large reservoirs.

Image: Copyright North East Wildlife : www.northeastwildlife.co.uk

Slavonian Grebe

WHERE TO VISIT THIS MONTH

January is a great month for winter wildlife watching- so why not visit one of our top five sites?

Words: Alice Johnson

Image: WWT

Strangford Lough, County Down

This sea lough is home to a large number of wildfowl during the winter, such as shoveler, shelduck and pale-bellied brent geese, as well as waders like black-tailed godwit. Pale-bellied brent geese arrive here from Greenland and Canada and this area holds an important over-wintering population. The WWT Castle Espie reserve is located on the lough and is a great place to see wildfowl.

The Avalon Marshes, Somerset

January is a peak month to see spectacular starling murmurations as many birds arrive in the UK from other areas in Europe. The starlings often roost in the reedbeds at RSPB Ham Wall or at the Natural England site Shapwick Heath. It is advisable to call the starling hotline before visiting and to look up parking areas and prices. Along with starlings there is lots of wildlife to watch out for in this area including marsh harrier, wildfowl (such as shoveler and teal), bittern and great white egret.

Image: John Crispin

Islay, Argyll and Bute, Scotland

The main attraction on Islay is the 50,000 geese that arrive from Greenland to winter on this Hebridean island. Barnacle and Greenland white-fronted geese are present from around October to late March or early April. A good place to watch the geese leave their roost is at RSPB Loch Gruinart. Other wildlife on the island includes deer (red, roe and fallow), grey and common seals, otters and birds of prey such as golden eagle and hen harrier.

The Ouse Washes, Cambridgeshire/Norfolk

Bewick's and whooper swans migrate to spend the winter in the UK and both species can be seen in the Ouse Washes. Bewick's swans arrive from Siberia, while the whooper swans migrate from Iceland. Good places to see these species are at the RSPB Ouse Washes reserve in Cambridgeshire or at WWT Welney in Norfolk. Other winter wildlife highlights include wildfowl such as pintail, waders like black-tailed godwit and birds of prey such as marsh harrier.

Image Michal Šúr: www.michalsur.sk

Image: Norfolk Wildlife Trust/Elizabeth Dack

Salthouse Marshes, Norfolk

The Norfolk Wildlife Trust Salthouse Marshes reserve is one of the places you might be able to catch a glimpse of snow bunting before they leave the country in February and March. This species arrives from Greenland, Scandinavia and Iceland and the shingle bank on the reserve is a good place to try and see them. Various waders and birds of prey, such as barn owl, are also present on the site.

WHAT'S ON IN JANUARY

Coastal Futures Conference

18th- 19th January, London

If you're interested in all things marine and looking for an intensive crash course on the most pressing environmental issues facing these ecosystems, you might want to kick off 2017 with the Coastal Futures Conference.

The conference will bring together a dizzying array of NGOs, researchers, and policy makers, with over 40 presentations from leading experts in the field, more than 140 organizations represented, and over 300 attending delegates. All these great minds converging in one location provides a unique opportunity for any budding marine conservationist to get up-to-speed on cutting edge marine research, management plans and policy decisions. It's also a great way for young researchers to make valuable connections in their field and collect ideas for future research projects. "Lots of people send new staff to the meeting simply so they get some sense of the realities of what is going on," says Bob Earll, the organizer of Coastal Futures.

Even if your focus as a naturalist is not necessarily marine, Bob says, learning about marine management strategies can provide insights into how our management of the marine and terrestrial environment differ. While our management of land-based ecosystems is geared towards managing the land itself, marine ecosystem management has more of a focus on controlling human activity. These different strategies can inform one another, and being familiar with both can be valuable to any conservationist. In addition, the conference's heavy focus on policy after Brexit and the government's 25-year plan will be useful for anyone considering an environmental career in the UK.

Other event highlights will include information about coastal erosion and flood management, offshore wind energy, fisheries management and science communication.

The Coastal Futures Conference will take place in the Brunei Gallery at the University of London on January 18-19th 2017. More information about attending the event can be found at the conference's webpage.

Rachel Fritts

Big Garden Birdwatch

www.rspb.org.uk

28 - 30 January

Support the RSPB by joining in with the world's largest bird survey – and you can do it all from your own back garden! Count the birds you see for 48 hours and help the RSPB build a picture of how our wildlife is doing. Head to their website to sign up.

The New Year Plant Hunt

www.bsbi.org

1 - 4 January

Join the Botanical Society of Britain and Ireland to discover which wild plants are in bloom in the New Year. All it takes is 3 hours and you can help map out their data. There is even an app to help you count! Visit the website for further information.

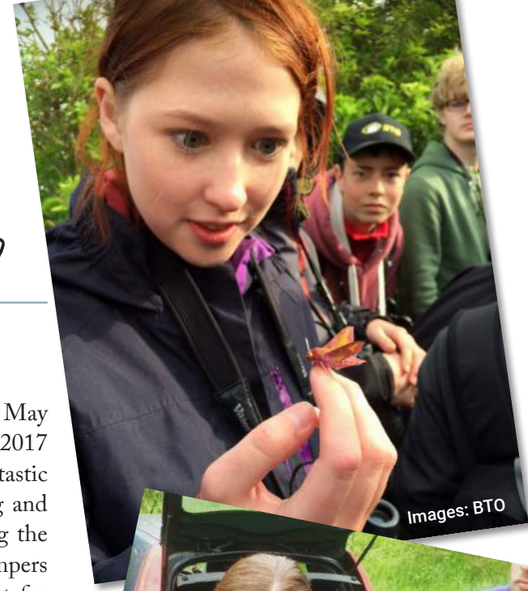
Wildlife Photographer of the Year

Natural History Museum, London | www.nhm.co.uk

Until 10 September

Don't miss the opportunity to see some of the best wild-life photography at the world famous showcase in London. For a sneak preview, check out Young Wildlife Photographer of the Year 2016, Gideon Knight on page 35.

BTO BIRD CAMP 2017



Aspiring naturalists, ornithologists, and conservationists aged between 14 and 18- the British Trust for Ornithology has a great opportunity for you.

Sponsored by the Cameron Bespolka Trust and hosted at the BTO's very own camping village in Thetford Forest, BTO Bird Camp 2017 is an amazing annual event aimed at young people with an interest in the avian. Bird Camp is supported by 'Next Generation Birders' and 'A Focus on Nature', and is a wonderful place for young naturalists to gain an insight into the array of conservation work BTO undertakes, whilst being guided by a range of knowledgeable and experienced staff.

Taking place from Friday 26th May - Sunday 28th May, Bird Camp 2017 is set to be a weekend of fantastic and educational birding, ringing and nest finding. As well as enjoying the wildlife in Thetford Forest, campers will venture to the Suffolk coast for a private visit to Landguard Bird Observatory, with stops at reliable sites for special species like Stone Curlew, Marsh Harrier and Bittern. Participants will be accompanied throughout the weekend by a team of experienced birders, naturalists and scientists from BTO, NGB, AFON and more, making this a valuable opportunity to make contacts and friends.

My Experience of Bird Camp

In 2016, I travelled up to Thetford in Norfolk for the BTO Bird Camp. Sponsored by the Cameron Bespolka Trust, the camp was an amazing, packed weekend where I was able to meet lots of other young birders and take part in lots of activities which obviously included birdwatching!

After arriving at the BTO Headquarters we were given a talk on the itinerary for the weekend, before having dinner and heading out to our campsite, which was hidden amongst the beauty of Thetford Forest. On the first day, we split into groups and took part in bird ID, bird ringing, bird mapping, and nest recording at Nunnery Lakes Nature Reserve. These were really interesting to learn about and get involved in. My favourite activity was nest recording, as I have always wanted to learn more about it so I could get involved in future.

This packed morning was then followed by a quick stop off at the BTO Headquarters for breakfast and lunch before heading off to RSPB Lakenheath Fen, where we split into two groups and walked around the whole reserve. It was a long walk but I managed to see quite a few lifers; Bittern, Bearded Tit and Crane to name just a few. The evening was spent nightjar tagging- we managed to observe them flying and hear them churring as well as watch them being ringed, which was amazing as they are such peculiar birds.

We were up bright and early the next morning to travel to Landguard Bird Observatory. Here we learnt about the observatory itself and did some sea watching, where we spotted Little Tern and a flock of Brent Geese. Finally we visited various sites across Suffolk, where I saw my first Woodlark, Garganey, Dartford Warbler and Redstart!

This was an amazing experience as I got to meet the brilliant BTO staff and fellow young birders, some of which I had previously spoken to over Twitter, who are just as enthusiastic about birds as me. I also saw many lifers which was a bonus- I am really hoping I will be able to go next year as well.

Mya Bambrick

A Starling Experience

This month, James McCulloch tells us about the roosting starlings at Hedgecourt Lake, his patch in east Surrey.

Driving along Mill Lane, parallel to Hedgecourt Lake, with only a few metres between our car and the choppy water, my eyes were glued to the expanse of the lake. The recent drop in temperature was evident; there were thin sheets of ice covering the surface despite the wind kicking up some large waves. In the centre of the lake in particular there was a large, unbroken island of ice, on the edge of which were hundreds of gulls loafing. The flock warranted closer investigation, of course.

We parked at the end of the road, so close to the water that it nearly reached our front tires. After which I immediately jumped out of the car and set up the telescope, eager to see if anything out of place could be found. Straight away I spotted a group of pochard feeding on the edge of the ice. Hedgecourt is a stronghold for this species in the winter months and they are often joined by tufted ducks when smaller waterbodies nearby freeze over. As the sun began to set everything seemed to go quiet: the elegant grebes stopped diving, the gulls ceased their chattering, and even the honking geese fell silent.

The light was fading fast and now droves of birds were darting over our heads like military aircrafts headed for the enemy: starlings. Some in small groups, five or six, and others in larger assemblages approaching a few hundred. Amazing, though these were only a small piece of the spectacle that was about to unfold before me.

Although they were congregating at the far side of the lake I could still hear the bird's constant chattering. The birds were conversing constantly with their peers, perhaps gossiping about the best feeding spots. The flock soon swelled, as more arrived, to a couple of thousand birds; though with more arriving all the time, this, again, was only the beginning.

As the flock continued to grow in number, small parties would break off from the group and tour the nearby fields before rejoining the main body. While, on another occasion, nearly the whole flock left the lake and flew back over our heads before returning a few minutes later. They scythed across the water leaving nothing but the sound of 'plops' as they lightened their load. We were scared to look up.

Just before the light failed entirely, the murmuration reached its climax: thousands upon thousands of starlings twisted and swooped in the sky above the reeds. They were impossible to count, though a guess put them at a figure in excess of ten thousand individuals. It was a truly mind-blowing and breathtaking sight.

As the sun burnt out on the horizon I was disappointed to realise that the show had come to an end. Group after group, the starlings were flying into the reedbeds dotted around the periphery of the lake. There were so many piling into such a small space, it was impossible to believe that the reeds could bear their weight. There were several starlings to each reed stem – how was it they didn't collide?

Images: James McCulloch

I was sure the density of starlings would push something out of the reedbeds and I was right: firstly a kingfisher darted out from the yellowing Phragmites and then a bittern on slow, wide wingbeats crossed to another, smaller reedbed; both looking for a more peaceful spot to spend their night.

For a while after the starlings had all landed they continued to chat, however soon even that chatter died down and the starlings that had given me the show of my life prepared to sleep away another cold night.

Would you like to tell readers about your patch? Contact editorial.newnature@gmail.com to find out how.

Image: Richard McMellon

SPECIES FOCUS

Megabunus Diadema

by Calum Urquhart

This month's species is a beautiful little beast, the harvestman, *Megabunus diadema*. With its black, white and gold mottling, double-diamond shaped saddle, and stylishly spined ocularium (eye turret), this must be the prettiest of all the UK harvestmen. It really is a stunner.

Identification of this species is simple, it is the only British harvestman with such long spines on the ocularium. This, coupled with its spiny legs and distinctive colouration, makes *Megabunus* truly unmistakable, even to non-experts. How is it then that such a distinctive species is recorded so infrequently? Well, this wonderful cryptic colouration isn't just for show: it allows this species to blend in perfectly with the lichen-covered rocks and trunks on which it dwells. It is an ambush predator, feeding on invertebrates such as small flies, so spends most of its time entirely motionless. Something which, when coupled with its small size - no more than 5mm - makes this harvestman incredibly hard to find.

That said, with a little experience and practice, you could soon find yourself contributing records of this species.

FIND A MEGABUNUS DIADEMA

Here are my top tips for finding this glamorous little arachnid:

- Try looking in woodland, particularly broadleaved woodland in the lichen-rich northern and western parts of the UK. Over half the records of this species sent to the Spider and Harvestman Recording Scheme are from woodlands. Alternatively, try looking in areas of rocky scree. (Don't worry if you live in the South-East, I've seen them at Monks Wood in Cambridgeshire, and populations have been found from Norfolk to Kent).

- Look closely at tree trunks and rocks as this species is frequently found at rest on these surfaces. Make sure to be swift with a pot for examination though, as soon as it realises it's being watched it will dash off with a surprising burst of speed!

- Get grubbing! 'Grubbing about' is a top method for finding this species. Turn over logs and stones, lie down and sift through the leaf litter. This is also an excellent way of finding a whole host of other invertebrates, from beetles and ants to millipedes and slugs.

- Try at different times of the year. This species can be found all year round, but some populations seem more active and abundant at certain times of year.

Once you've managed to find it, snap a record shot and send off your recorded findings! This is now easier than it has ever been, with the recent release of the iRecord app. There's a good chance that you will be contributing to our knowledge of its distribution, which is currently rather patchy, and probably recorder biased.

I love this species. Not just for its outlandish looks, but for the sense of achievement that comes from finding it. There's something quite mystifying about staring into that decorated eye through a hand lens. I'll doubt I'll ever tire of seeing *Megabunus* and hope those reading this may feel inspired to get out there and find your own.

THE NEW COMEBACK KIDS

A favourite of birders, bearded tit populations are surging, and the chances of seeing them are better than ever.

Words: Jonny Cooper

Image: Gary White

They might be one of the worst named birds in the U.K (being neither bearded nor a tit); but one thing is for certain the Bearded Tit (Panurus biarmicus) is currently riding high on the back of a dramatic resurgence. As recently as 2011 the population numbered just 360 pairs. The latest data, published by the Rare Breeding Birds Panel, shows that since then it has skyrocketed to 772 pairs in 2014.

The Bearded Tit, sometimes called the Bearded Reedling, is a specialist of reed bed habitats. Because of this its distribution is somewhat limited to a relatively small number of sites across the U.K. In fact, they are one of the few song birds which lives in reed bed all year round. They achieve this by switching their diet from insects in the spring summer to seeds in autumn and winter. To cope with this, they eat large amounts of grit in the autumn and even more remarkably, alter their gut morphology.

The population of Bearded Tit's in the U.K has always been fragile. They are very susceptible to cold winters as snow and ice stops them reaching vital food resources within their wetland home. The population crash in 2011 was almost certainly a result of the very hard winter in 2010 which caused many to die.

Being so susceptible to hard winters means the population has always fluctuated and the fact that the birds are often sedentary and do not move very far means local extinctions have occurred. For example, in 1947 the cold winter caused the population in Suffolk to drop to just five pairs. However, when this happens all is not lost. In a good breeding season, each pair can have up to 4 broods with an average of 6 eggs per brood. That equals a lot of young and means the population can bounce back quickly.

So, what does the future hold for the Bearded Tit? The population has increased now for 3 years in succession with a jump from 618 pairs in 2013 to 772 in 2014. This is the highest number of pairs recorded since population monitoring began in 1995. Conservationists are working hard to help them, with areas of reed bed being managed to maximise its benefit to them. The results of this can be incredible, for example careful management of reed bed habitats at RSPB Blacktoft Sands has helped the population in the Humber area increase from 40 to 250 pairs in only five years.

The population will always fluctuate but with milder winters and more and more reed bed being restored it looks like the future is bright for the Bearded Tit.

BEARDED TITS IN NUMBERS

772 PAIRS IN THE UK

Diet: invertebrates and seeds.

16 - 17 cm

Bearded Tits lay **4 TO 8** EGGS

Nest: Built using vegetation, in the reeds

Lifespan **3** YEARS with **2 - 4** broods a year

Fledging occurs after **12 TO 13** days

Whooper Swan

Cygnus cygnus

Elliot Montieth tells us about one of his favourite winter birds- the whooper swan.

The whooper swan *(Cygnus cygnus)* is one of those avian wonders which you just can't go a winter without setting your eyes upon. It's graceful, it's beautiful, it's perfection. It's been estimated by the RSPB that each winter 15,000 of these winter angels arrive in the UK from their breeding grounds over in Iceland and Scandinavia, with the occasional breeding pair up in the most remote parts of Northern Scotland.

For many the whooper swan heralds the arrival of a new fall and with their snow white plumage and historic 'whooping' call who wouldn't have it as that bird, in Finland it's the national bird! Over here in the UK & Ireland you'll most often come across whoopers feeding on arable farmland, salt marsh and inland water bodies, but unlike their close-relative and much more familiar cousin the mute swan *(Cygnus olor)*, they tend to be found in more remote places and you often have to travel to a specific site to see them, such as WWT Martin Mere or Caerlaverock. For me on the good old Wirral this means popping on the 487 from Birkenhead down to Neston were I can either go to the RSPB Burton Mere Wetlands or venture out onto the magnificent Dee Marshes where if you're lucky you won't just find our wintering whoopers, but also their smaller cousin the Bewick's Swan *(Cygnus columbianus bewickii)* from arctic Russia. These two species are extremely similar in appearance but the simple ways in which to separate them are size (Bewick's are much smaller than whooper), the roundness of their head (Bewick's are more circular than whooper which appear elongated), the length of their neck (Bewick's have a noticeably shorter neck) and last but not least the colour and shape at the base of their bill (Bewick's have a rounded yellow patch whereas whoopers have a wedge shaped one). Simples.

Over the past couple of years the whooper swans have been the subject of a number of studies carried out by various groups and in particular the Waterfowl & Wetlands Trust (WWT). For those of you who used to watch the 'Watches', when Bill Oddie & Kate Humble were still presenters, then you should remember them being based at the pretty epic WWT Martin Mere reserve in Lancashire, which is where WWT staff trap, ring & record sightings of colour ringed birds. You may not think that a colour ring on a bird's leg could open up any locked doors for you but in fact they do! After many ringed birds and many years later, certain individuals have been tracked to and from their breeding & wintering sites as well as traditional stop off points on migration. Data collected, due to the ringing of whoopers, has shown us that, like gulls, they are extremely faithful to their wintering sites. Recoveries from WWT Martin Mere & WWT Caerlaverock have shown that birds have returned to the same wintering site for a consecutive 10 years, but what I found rather more interesting was that it had been proven that a small percentage of birds from the Icelandic population go to winter on the continent and that a small percentage of birds from the Scandinavian population in fact winter in eastern England.

To round off, I'll finish with a short story of a ringed whooper swan which myself and young birder Darragh Hudson came across earlier this year. On the 17th of June, before we went off for a weekends birding at Flamborough and RSPB Bempton Cliffs, we had a short stroll around in the one and only Pugney's Country Park in North Yorkshire. Shortly after arriving we were informed that a whooper swan with a colour ring had been spotted along the River Calder. After a period of about 20 minutes patrolling the banks of the river we eventually stumbled across the whooper and straight away noticed the orange ring on its left leg. Considering the location & time of year could it be an escapee? Well surprisingly it wasn't, in fact it had been trapped and ringed the previous day at Swillington Ings in West Yorkshire, just 8km north east of Pugney's.

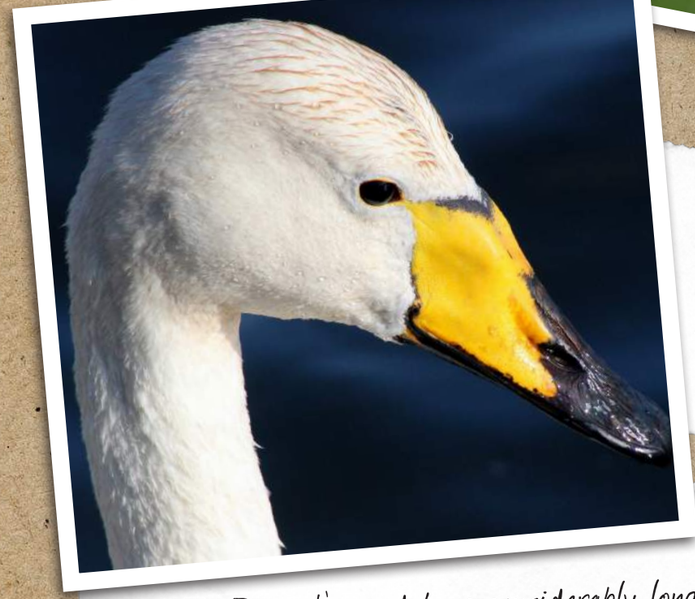
ID TIPS

Learn the difference between whooper and Bewick's swans

Bewick swans have a larger black area and less yellow on their bills.

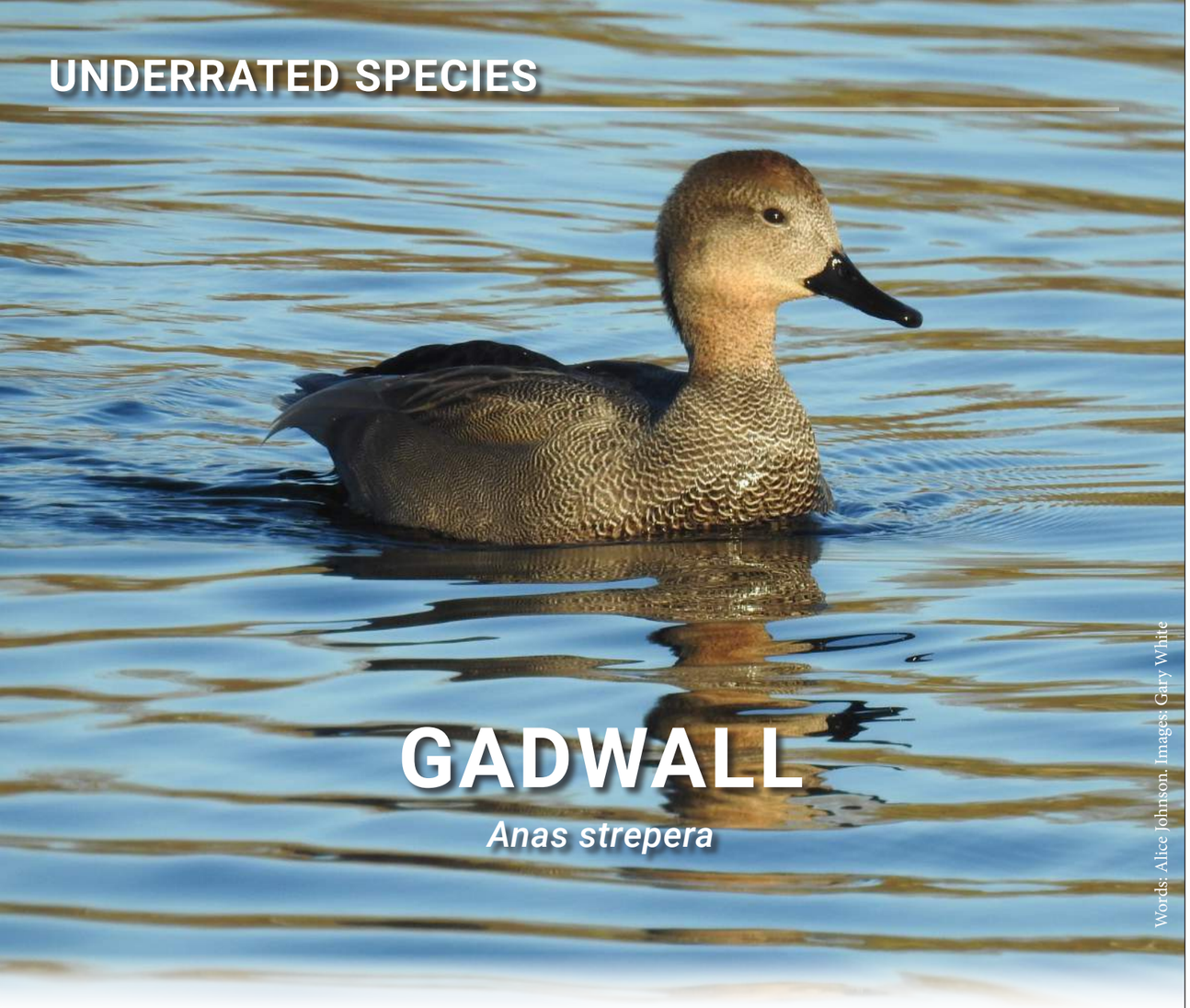
They are smaller than whooper swans with shorter, 'neater' necks and rounder heads.

Image: Alice Johnson



Whooper swans have a big wedge of yellow on their bills. Their heads are larger and more wedge shaped than the rounder Bewicks'.

Whooper swans are larger than Bewick's, and have considerably longer necks. This is especially evident when they are in the water and can be seen by comparing the area where the neck meets the breast- whoopers will be bulging, and Bewick's will be much flatter.



GADWALL

Anas strepera

Words: Alice Johnson. Images: Gary White

Winter is a time when hundreds of thousands of wildfowl from other countries appear in the UK. The huge flocks of swans, geese and ducks, with some males showing brightly coloured plumage, means less assuming birds are easily overlooked. One such species is the gadwall. At first glance it might appear that other birds, such as the humble mallard, are considerably more attractive, but it is the detailed plumage of the gadwall that make this species full of undervalued beauty.

The male gadwall does not display bright colours like other wildfowl species, such as teal, but instead has a brown-grey head and an apparent grey body. Some would say it sounds a rather dull bird but if you look closely at the male's 'grey' plumage you can see an interwoven pattern of barred white and black, which looks somewhat like the intricate trail of a worm under the sand. The black eye and dark bill give its soft, patterned, brown face a delicate appearance, with the warming croaking sound it makes being utterly charming. It's white belly, black rear and yellow legs are further endearing features.

Looking closely your vision may become fuzzy as you get lost in the mind puzzle that is the male gadwall's plumage but once recovered you can appreciate that the female is equally as beautiful. The female gadwall follows the trend

"The detailed plumage of the gadwall makes this species full of undervalued beauty."

of the classic mottled brown appearance in female ducks. However the proportion of various shades of light and dark brown plumage is so pleasing to the eye, that along with the white belly and partly orange bill, you cannot help but be impressed by this bird.

Watching gadwalls feed you can see that they are not energetic like diving ducks, who appear to want all the attention by playing a game of hide and seek with you, but instead they simply but purposely move along the water placing their heads beneath the surface in search of food, such as vegetation like pondweed and grass. They may however resort to a different tactic and steal food found by other species of wildfowl. They can be seen around flooded gravel pits, reservoirs and estuaries and are often in pairs. Watching them go about their lives is warming to the soul. Observing ducks in flight is also a joyous pastime as they always appear to be making so much effort. They are not graceful like some other birds, but they are determined to make it to their destination. If you see a gadwall in flight the white speculum can be seen.

Around 1,000 pairs breed in the UK. This species makes its nest on the ground and lines it with grass and its own feathers, before laying around 9-11 eggs. During the winter resident birds will be joined by those from Iceland and parts of Europe.

The gadwall is in many circumstances overlooked, perhaps when you are on the lookout for a rarer species or when you are just in a hurry. When you next glimpse a gadwall delicately drifting on the surface of the water why not just take a few minutes to get lost in its plumage and appreciate its delicate detail.

Is there a species you think is underrated? Contact editorial.newnature@gmail.com to let us know.

AN EAR FOR AN OWL

Interested in nocturnal wildlife? James Miller tells us about the beautiful and fascinating tawny owl.

Tawny owls aren't easy to see at the best of times, being nocturnal and very elusive. It is however much easier to hear them at this time of year as they are very vocal, marking their territories in preparation for the breeding season. If they live in your area you will probably hear some hooting on a calm night, which can reach 90 decibels (as loud as a lawnmower) and can carry more than 600m. Wet nights aren't ideal for listening to tawny owls because their calls will not carry as far, closer to 70m but this depends on the amount of rainfall. Moreover, it wouldn't be very comfortable to sit outside in!

If you do hear some hoots, it may interest you to know a bit about the ornithological background to them. For a start, the familiar 'twit-twoo' it is made by two individuals not one. It is the females who make the higher pitched twit (or, more accurately, 'kewick' call) and the males who give the hoot in reply. The common misconception is thought to have originated from Shakespeare's 'Love's Labour's Lost':

> "Then nightly sings the staring owl,
> Tu-whit;
> Tu-who, a merry note."

There have been records of female owls making quieter, hoarser variations of the male hoot, and males can make the female 'kewick', which is extremely confusing. These two calls help the owls locate each other in the dark and the males to declare their territories. Although the male's hoots may all sound similar, they are actually subtly different, and these differences can give you basic information about the individual. For example, the pitch of the call can tell you the size of the owl – the lower the note, the larger the bird (which makes sense acoustically). This is very important for tawny owls because it allows them to know when to back off from a big, powerful male's territory. Furthermore, more successful males have been shown to have longer notes and those with more blood parasites have calls with less frequencies. And this is just one vocalisation out of the tawny's repertoire of at least 10. There is a lot still to be discovered about the science of tawny owl calls. This isn't surprising considering how difficult they must be to monitor.

To go one step further, try striking up a conversation. By cupping your hands together in a certain way and blowing through them you can imitate the tawny owl's hoot to such accuracy that it fools the real owls into replying (there are several good internet tutorials on this). If you are lucky, you may succeed in coaxing one into view.

They have probably already decided on a nest site by now, therefore by tracking the locations of these noises you may be lucky enough to discover a nest hole. Be very careful because tawny owls are vicious when defending their nest and can be very dangerous. Famously, the photographer Eric Hosking lost an eye to one. However, if you are cautious and keep a safe distance, you might be lucky enough to witness some owlets being raised, as I had the privilege of doing last spring- you can see some videos on my blog: www.kneedeepinnature.co.uk.

TO INCREASE YOUR HEARING:

To increase your hearing when listening for tawny owls, you can cup your hands behind each ear and open your mouth wide – it may look a bit silly but it is very effective.

Image: Jake Gearty

Try striking up a conversation:

By cupping your hands together and blowing through them you can imitate the tawny owl's hoot.

HEDGEROWS: *Corridors of the Countryside*

Georgie Bray talks about the importance of hedgerows and how the Countryside Stewardship Scheme is failing to incentivise appropriate management.

Images: Georgie Bray

Hedgerows are precious and, despite the ease of overlooking such structures as prickly field borders, are one of the most important characteristics of the British countryside. They provide valuable habitat for trees, shrubs, and ground flora, and in turn create carefully woven homes, or busy byways for wildlife.

Such complex systems, however resilient, need careful management to promote and sustain a healthy and diverse ecosystem. Farmers fulfil this main role of stewarding the maintenance of hedgerows, but many are unfortunately losing interest in this essential branch of countryside management. Minimal financial rewards gained for the complicated uptake of countryside schemes, means we are precariously close to losing a fundamental cog in UK conservation.

To promote the integration of conservation into farming practice, a number of grants under the Countryside Stewardship Scheme (CSS) incentivise the maintenance of hedgerow health, amongst other initiatives. The hedgerow standalone grant provides a two-year agreement with rewards for planting standard hedgerow trees or supplement, as well as laying, coppicing and gapping hedgerows where required. Accompanying this are the mid and high-tier grants, previously accompanied by the Entry-Level Scheme, that encompass more general countryside management, with different levels of commitment, providing different financial benefits. Unfortunately, although rewards are available for farmers, the schemes do not seem to be providing much encouragement.

In recent years, applications for the CSS grants have experienced a

heavy downfall. This demonstrates a plummeting lack of interest in current schemes. In October, Farmer's Weekly underlined the declining interest, stating that for the 2016 mid-tier CSS there were only 3,770 applications, with even fewer in 2015, against the 20,000 Entry Level Stewardship agreements that finished in the past two years. Where farmers were applying for the lowest commitment grant available, the prospect of signing for a scheme requiring more time has led to farmers ditching the Countryside Stewardship Schemes altogether. The vice-president of the NFU voiced concerns over this decline, saying "far less appear to be applying for CS".

Although farmers are in charge of the majority of hedgerow maintenance nationwide, difficulties in understanding the agreements, accompanied by poor financial rewards have led to a loss of patience, and in turn, a loss of confidence in these financially incentivised schemes. Around 1500 agreements remained with outstanding payments in October from 2015. Furthermore, one farmer explained that the requirements were becoming complicated to understand, as well as being so time-consuming that the financial rewards did not pay for the time spent in conducting what was required.

The CSS will remain until we leave Europe, but until then the NFU have asked for a number of improvements to be made. In doing so, we can hope that farmers will once again want to cooperate with Natural England to help conserve a major proportion of our countryside. Hopefully, regardless of our membership in the EU, revision of incentive based schemes will take place, so the New Year may shed a new light on farming and conservation cooperation.

DOORSTEP DEFORESTATION:

Britain's Tree Planting Problem

Words: Sam Manning | Image: Gary White

"You know, A tree's a tree, how many more do you need to look at?"

The words of former US president Ronald Reagan advocating the destruction of the redwood forests as Governor of California in the 1960's, highlighting not only that history isn't short of more than a few fatuous American politicians, but a wider ignorance in regards to the benefits of trees, forests and woodlands to both humanity and nature.

Oliver Rackham used to speak playfully about the attitude of politicians and their ability to 'make the tree's grow', so if afforestation is such a political golden nugget – why does Britain have such a problem with planting trees?
The UK currently sports 2.84 million hectares of tree cover, roughly 12% of total land cover, and 29% of this is made up of non-native Sitka spruce plantation alone. This is a meagre wisp compared to an average of 44% in other EU countries. Last month the Woodland Trust released a statement suggesting that England is technically 'deforested', with rates of planting lower than that of extraction.

So Blighty has a balding problem, but what does the Government have to say about this? With the aid of a £1m Woodland Creation Planning Grant Fund and £19m Woodland Carbon Grant Fund, Whitehall's target is to plant 10,000 hectares per year from 2010 -2025, which they predict will absorb and store 87 Metric tons of carbon dioxide equivalent per year (MtCO2e). For the humans among us that amounts to roughly how much CO2 is emitted by heating every home in the UK for a year. So the problem is being solved then? Well not according to CONFOR (Confederation of Forest Industries) who in a commons debate on tree planting in December 2016 revealed that planting rates are well below the Governments UK target, and that in England rates are dismally low – 700 hectares per year, a staggering shortfall on a target of 5000 hectares per year. They also predict this parliament to be behind on its promise to plant 11m trees this term by 7 years. The debate highlighted a call for far more ambitious levels of afforestation in the UK, and that the problem with such low planting rates was due to a cumbersome and difficult grant application system that puts off farmers and landowners. So then perhaps the solution can be found in the private and charity sectors? The Woodland Trust has been getting stuck in to an ambitious target of planting 64 million trees by 2025 and effectively doubling tree cover by 2050 by offering free trees, subsidies and advice to communities and landowners.

My view is that tree planting has simply fallen out of vogue. Our woody friends have become the victim of the 15 second attention span culture of modern Britain. If the most heavily used five letter word of 2016 beginning with 'Tr' was 'Trees' not 'Trump', we simply wouldn't have a problem. We have forgotten about trees, how else can we explain the complete lack of collective national grief or concern for the impending loss of one of our greatest cultural and natural treasures, the ash tree to ash dieback disease?
I believe that the solution to our wood problem is love. Reigniting the same passion for trees and woodlands that inspired Thomas Hardy can change it all, and that can start right here with nature conservationists. Fanatical about ornithology but can't name a single oak gall? Deforestation is the leading cause of bird species declines globally and even young woodlands provide habitat for BBoCC Red List and UKBAP species such as cuckoo, grasshopper warbler and spotted flycatcher. Mad about minibeasts? A single oak tree can support over 420 different species of invertebrate and 2000 invertebrate species rely on decaying deadwood for their survival. Barmy about Botany? (I'm really running out of these now). Calcareous grasslands and lowland heathlands are the bee's knees for all kinds of rare floral species, but so are ancient woodlands and only 12% of our remaining woodland cover is ancient, semi-natural and none of it is protected by statutory law (gulp, HS2). If I haven't convinced you yet then there are an insurmountable number of anthropocentric benefits to woodlands, such as barriers to the spread of disease and pesticide/herbicide drift, pollution and carbon sequestration, flood mitigation, human health benefits, community cohesion and social benefits, cultural significance, soil protection, wind buffering and cloud formation catalysts (yes that's actually true). New science from pioneers such as Paul Stamets is even suggesting that bee population declines may be due to a lack of woodland and deadwood fungi from which bees forage for their immuno-regulatory nutrients. Science overload!

So let's fall in love with woodlands again and plant our way to a Britain richly endowed with the right trees, in the right place.

NATURAL PHENOMENON

A household name due to his time presenting The Really Wild Show, The Wonder of Animals and of course, Springwatch, Chris Packham is a celebrated naturalist, author and photographer. His honest nature, formidable passion and clear love of music may occasionally get him into a bit of hot water, but mostly it has made him a firm favourite amongst the British public.

Here, Chris talks to Alexandra Pearce about the importance of politics and why social media should be vital to young naturalists.

A: Getting jobs in nature related positions is difficult these days, what career advice would you give to upcoming young people keen to get into the industry?

C: Buy an alarm clock. I have a number of maxims I live my life by and one of them is: if you're standing up when everyone else is lying down then you're going to get ahead. I am an idealist to the extent that I believe in a meritocracy. Invest in the development of an ability or a talent and eventually, if you stick with it, you'll be rewarded. I think that ultimately, there's no substitute for hard work. There are, as we know, people within our population that we class as genius, but they're very rare, so the vast majority of us have to try to get what we want from life by working hard. If you are awake and doing something productive and progressive, you are more likely to make progress. The metaphor for buying an alarm clock is get up and get on with it and work hard.

I meet a lot of young people, a lot of really bright, ambitious and talented young people, but if I were to identify one symptom that is counterproductive to their aims is that they sometimes expect a reward too quickly, when sometimes you just have to put the hours in. You have to start on the bottom rung of the ladder. We live in a society where viewers tune in on a Saturday night to watch people plucked off the street and turned into superstars and it isn't really the healthiest way to progress, so I think just invest in yourself, believe in yourself, keep working hard and in the long term, things might pay off.

Winning is not giving up.

A: You're a fantastic photographer. Which recommendations would you give to aspiring wildlife photographers?

C: Take a leaf out of nature's book. The reason why we have so many species on the planet is that all those organisms are actually trying to avoid competition, so if you're going to make a success out of anything, you need to find your own niche - the best way to progress more comfortably and quickly is to avoid to competition. I spend an enormous amount of time looking at other people's photographs, absorbing ideas, identifying what has already been done and what hasn't worked and is therefore not worth doing again. I recognise that photography is more of an intellectual process than a practical one; the more you think about your pictures and the more you consider them after you have taken them, the better they will become. Think about art; think about communication; think about new ideas and how you can express yourself. And don't be bogged down by the idea that everyone's got a state of the art camera these days, that they're highly affordable and there are people taking 2000 pictures a day therefore you can't compete. No camera ever took a picture, the human does that, and humans are always inventing and coming up with new ideas and if you can come up with a new idea, then you've got yourself a niche and you'll make progress.

A: Caring about nature came naturally to you. How do you think we should be encouraging the upcoming generations to get involved in wildlife and be excited about it?

C: To initiate a love of nature you need to meet it. You have to go out and feel it and become inspired by it. You can

watch it on a screen and that's fine; I have been watching wildlife online that I will probably never see in my lifetime, but I couldn't smell them, I couldn't hear them, there's no sense of anticipation, [the videos] had all been edited. But when I was out this morning, walking with my dogs in the woods and we were cold and we were wet, I saw something and had to sneak after it as it flew away. Tt turned out to be just a jay but it was a far more rewarding experience. The trouble is, I think far too many young people aren't awarded that experience these days because they're not allowed out on their own and the world is dangerous place, but they really do need to get in contact with wildlife and find a means of doing that. Get your parents to take you out, join groups that will go out or encourage things in your school, college or university, but ultimately it is about connection. That is when you really form that bond and feel that deeper affinity.

A: What about the suggestion that wildlife isn't cool to young people; that some young people are made fun of for caring about nature, how do you think we turn that on its head?

C: Well yeah, okay. Look, I don't think Justin Bieber is cool, or Chelsea Football Club is cool. I think individuality is cool and if you can be an individual, then that is cool! I wasn't a typical child for a number of reasons, and maybe I'm not a typical adult, but I have never given a damn what anyone else has thought about me and I suppose that's been a means to protect myself. I used to get bullied as a kid and I could have let those people get to me, but I didn't and I just ploughed on, but [I get] it's really hard. Being close to animals is pretty cool if you ask me. I hate to be old fartist, but I went to an enormous comprehensive and I was the only one into wildlife and used to get bullied. During that time, there was no one to connect with but these days, there is social media. I work with a number of young people and they are all connected on social media; they talk to each other all the time and they do, therefore, have the reassurance that they are not alone. There are young people with similar interests out there – they may not be in your classroom, or your school or even your county, they might be on the other side of the world, but they are there and social media provides the ability to connect with them. I think social media should be really important to young people as it can take away the isolation. Get on social media and find people, because they're out there. There a lot of really clever, actively engaged young people and you just need to find them.

> "There are young people with similar interests out there... you just need to find them."

A: Currently, there are serious concerns about the environment; in your opinion, what do we need to do to bring about positive changes for the future?

C: At the moment, what we're trying to do is put sticking plasters on a very big problem, trying to apply triage to a badly wounded environment. We're trying to keep it alive and in sufficient health so that at a certain point in the future, we'll be able to repair it. Now, the reason we are unable to make more significant progress is that, at this point in time, we are unable to elect at any level, decision makers who fully understand why we must look after the environment. We are not blessed at the moment because we're being governed by people who have very short term objectives. They are more occupied with economic growth, which means increased consumption – bad news for the environment. One of the reasons I remain optimistic is that the readers of your magazine, who are probably already far more knowledgeable than many politicians, will be able to make the decisions one day. We are waiting for a generation of politicians who will be sufficiently knowledgeable to make the right decisions. In the meantime, all we can do is empower ourselves as individuals to make a difference and to try and slow the juggernaut of decay. It's a frustrating and difficult job.

My generation will be one that's not remembered fondly in the future, because we have the answers and the ability to rectify problems and prevent further damage and we're not doing it. I think that future generations will look at us and think 'what were you doing?' we were not blessed with ignorance and we didn't take action and that is not something that I am particularly

comfortable with. In my lifetime, there have been catastrophic failures and I don't think we environmentalists have done what we should have to make amends as quickly.

A: So do you think in order to aid the environment, young people should understand more about politics so they can actively make informed decisions?

C: Yeah, I think they're inextricably linked. The problem is, that many young people are disenfranchised with politics. When I was 16, I had been brought up watching the news and reading newspapers, it was part of the culture that my parents encouraged, so I was a very politicised teenager, but I think on a general basis, young people have no faith in what purports to be the democracy in which they live. My step daughter for example, has grown up at a stage where politicians have constantly disgraced themselves and so why would she believe in them, why would she see any future in understanding the status of contemporary politics and why would she vote? She does fortunately, but I think many young people don't. And I don't blame them, not at all, this isn't a criticism. We see people acting in their own self-interest, we don't see a great number of public servants and we see an enormous amount of dishonesty and corruption, so why would young people think that ticking a box means anything? However, ticking a box is invaluable. You can get on a plane and fly 3 hours to a country where people will still die to put a tick in a box, that's how important politics is; it's an enormously empowering thing and I would encourage young people to take an interest in politics because it is a means where they can shape their future. Look at Brexit. It would have been a different story if more young people would have voted. It's about their future and once again, our generations have failed them. I do think it's very important that people take an interest in politics and the decision makers, certainly from an environmental perspective, because we do need to encourage electable representatives to understand the situation and at current, whilst some do, the vast majority don't.

A: If you had to give young people just one piece of advice, what would that be?

> "Always think that you, and therefore collectively we, have the ability to make a difference."

C: It's about empowerment, it's about believing you can change something. Never be apathetic. Always think that you, and therefore collectively we, have the ability to make a difference. Whenever something for me isn't going too well, I just try harder. I believe that collectively we can make a difference and in some small way I have seen this whilst working; things I have managed to motivate, others have joined in and collectively we've made changes. Self-empowerment is the most important thing, you may think that you're a lone voice in a crowd, but when the crowd start listening to you and start singing to your tune, that's a loud voice. My favourite piece of music is a track called 'Shout above the Noise' by [punk band] Penetration, the title says it all and the lyrics are even better, but that's what it is all about – shouting above the noise, you've got to make your voice heard. You have a voice and there is no point not using it.

Another punk mantra is 'the strength of the nation lies in its youth' and I firmly believe that; the energy, ambition, drive, and innovation of youth is something that should be recognised. I am ashamed to say that most older people think they're more important, but I don't, I think the more opportunity we give to young people to make decisions, reshape policies and make changes the better. Most people grow up and end up wearing brown and are totally risk averse and get too comfortable. Contentment is the greatest evil in the world and many young people aren't content, so they're free of that vice and I say, more power to them.

Chris Packham's autobiography 'Fingers in the Sparkle Jar' is out now. £20 Ebury Press. To find out how to win a copy, check out our Facebook and Twitter pages, or visit www.newnature.co.uk

Young Naturalists:

OUR SILENT WAR

Luke Nash talks about his experience with bullying, and how meeting like-minded young people through nature groups helped him to build a support network.

Hello, my name is Luke Nash, and I am a young birder and naturalist. You may be struck by the use of the word 'war' in the title, but my use of this will become clear as you read on. I'm writing today to address the issue that I, and many other young people just like me, are still facing in today's world: bullying.

But first, I would like to share my birding story, just to give you an idea of what young birders are facing in the present day. I first started birding aged eight, 'just to see what it was about', but pretty soon it became more than a hobby, it became a way of life, as it does with for most birders. Naturally I wanted to tell people about my new hobby and interest, and although I knew that not everyone was interested, I at least expected them to tolerate me liking it. However, upon me telling my 'friends', I was teased mercilessly, apparently because sport wasn't my favourite hobby, which was against the social 'norm'.

That is one thing which needs to be combatted in society: the meaningless categorisation based on how different you are from the 'cool' people, and the stupid idea that people should be victimised depending on how far 'down the social ladder' they are. Apparently, anything which is not sport, the opposite gender or 'Call of Duty' is different and should be placed on the bottom of the pile. Perhaps unsurprisingly, anything to do with nature is included, and I have had to put up with many nasty comments, which everyone else seems to think is funny.

I do not want to go into too much detail, although the most common one is general sniggering whenever I so much as look at a bird. However, I have encountered several other things, including bullies pretending to shoot a red kite flying over by making a gun gesture with their fingers, graphically describing shooting a blue tit in the head with a BB gun, threatening to kill all the birds at my local nature reserve (which just so happens to be Cley Marshes), messaging pictures of dead geese or pheasants to me via social media, and trying to kick a baby pigeon which had been trapped in a fence on our school's playing field. Just as it was getting worse, I discovered I was not alone.

The Young Naturalists Group Chat on Twitter was founded by Darragh Hudson in December 2015 and as of today has reached over 40 members. Though I was slightly sceptical of social media with regards to people from school, I was immediately struck by the wonderful dynamic within the group. Everyone was really kind and wasn't judgmental in any way. There was even what the youth of today label as 'banter' being thrown around occasionally, which added a real sense of friendship and community. I had finally found a place where I was regarded for who I was, not for who I wasn't, with the wonderful BTO Bird Camp in late May 2016 further strengthening the bond between me and the other attendees.

> "Just as it was getting worse, I discovered I was not alone."

After the camp, I made it my mission to help others with experiences like my own, and suddenly I felt determined to make a difference. So I started talking to as many young birders as possible about their experiences with bullying, and for most of them, unfortunately, this was nothing new. Examples I've read about have included bullies threatening to strangle robins, hurling verbal abuse at a person rescuing a sick seagull, entire year groups ganging up on young birders and attacking them, and being labelled a pervert for taking pictures of great tits. It was then that I realised that there was one big thing that needed tackling: perception.

Every year at my school we have two 'field days' and, to my delight, one morning in those two days was going to be spent at Cley Marshes. Of course, this was met with groans from my peers, but upon completing the visit, I was extremely surprised to have people walking up to me and saying it wasn't as bad as they thought it would be, including some of the people who had previously bullied me for it.

Now perhaps it's just a question of doing this on a wider scale. Fellow young naturalist Harry Witts brought up this issue in one of his blog posts earlier this year, and he suggested that a space should be created in the national curriculum devoted to studying nature. Personally, I think that idea hits the nail on the head. The only way to combat perception is to change it through teaching people how wonderful nature is. This would also combat another serious issue, which is that children are being 'denied' access to nature, as highlighted by Dame Fiona Reynolds, former Director-General of the National Trust, when speaking to the Cambridge News in June of this year. So what's stopping it being implemented?

It's time to make some noise about the plight of young naturalists across the country. Whilst I was reading the excellent BB Eye written by Stephen Moss in the July issue of British Birds, I was immediately struck by Mark Cocker's 'nightmare scenario' of being laughed at by a group of girls. Stephen Moss had then written directly beneath it the words:

"For young birders, this kind of embarrassment simply isn't an issue anymore."

Well unfortunately, it is still a problem, and birding still continues to be seen as 'uncool' or 'wussy', and certainly not 'mainstream'. It's time to change that view for good.

•

Editor's note

Unfortunately young nature lovers are often subjected to bullying. For some reason, being interested in nature is viewed as 'uncool', which is hard to understand because there is no subject more fascinating and intriguing than the natural world. Education could play a huge part in stopping this bullying because at present, people simply do not realise how important nature is to our lives, such as the vital ecosystem services it provides us with. The New Nature team certainly agree with Luke and other young naturalists that nature should be in the curriculum.

New Nature magazine provides a platform where any young individual can express their love for nature, be it birds, moss, insects or any nature related subject, without fear of being ridiculed. Bullying in any form is unacceptable, but sadly nature lovers are often targeted due to other people's ignorance. The most important thing is never to lose your love for nature because someone else says you should; always stay true to your interest in the natural world for it will bring you far more happiness than pleasing a bunch of bullies ever could.

Please do tell a responsible adult if you are being bullied, there is no shame in it as it happens to many of us at some point or another.

Alice Johnson

For more advice on what you can do if you or someone you know is being bullied, you can visit these organisations:

Childline
0800 1111

BullyingUK
0808 800 2222

NHS
116 123 (UK)

Samaritans
116 123 (UK)

NATURAL BEAUTY

Carim Nahaboo is an illustrator who specialises in natural history. Here, he tells us about dissection and why he recommends practice, practice, practice...

Which passion came first for you; natural history or art?
I had my first stick insects when I was 3 years old, and I would spend a lot of time in the garden and local forest looking at the insects and other wildlife. I remember drawing dinosaurs and birds at a very young age and any interesting creatures I had seen on TV! I think for me the two sides have always gone hand in hand, and each helps me to understand the other in more detail, or to explore certain things further. Drawing has constantly been a tool for me, similar to dissection - it allows me to take a much closer look at the subject and really look at the structures which work and grow together, often revealing things which I would otherwise overlook or take for granted.

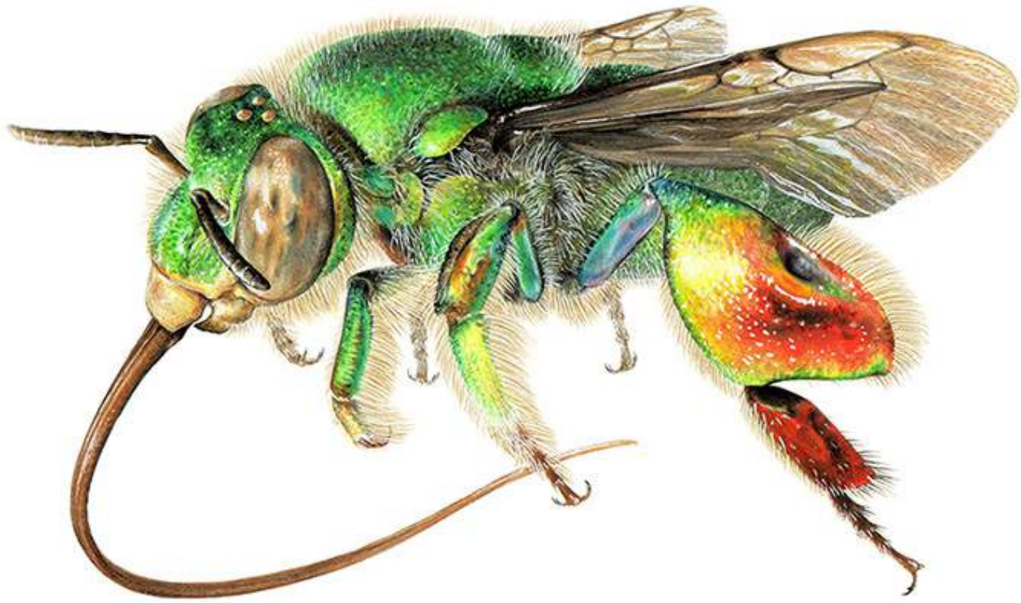
Why do you usually choose arthropods as your subject?
For me the world of arthropods has the most diversity of any animal group. There is never a shortage of subject matter and each time I look in closer detail at a certain species - even if it had been 'familiar' - there is always a new aspect which surprises me or furthers my interest. The anatomy, life cycles, and seemingly alien nature of many insects is what really fascinates me, especially parasites and species which have adapted to exploit a very specific niche or rely on other species for survival.

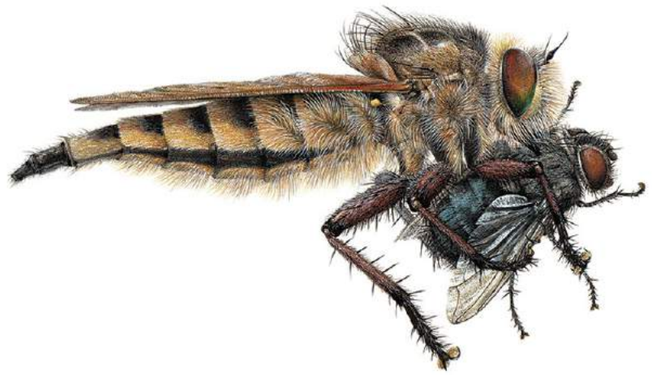
What has been your favourite project to work on?
I have been lucky in that the work I do can be extremely varied - from scientific identification material to more conceptual themes and stylised approaches. It's very hard to choose a favourite but it's often most rewarding to work on commissions which mean a great deal to the person who will own the artwork. For example, I have done a few beetle illustration commissions for entomologists who have retired from the Natural History Museum and have species named after them!

Wow, so you have been commissioned to illustrate scientific projects?
Yes, I've worked on several commissions for entomologists and a few projects for publications. One of these was a newly discovered species of Tarantula from Northern Argentina, which I was illustrating before it had been named! As well as the more highly finished illustrations I have also worked on line work and diagrammatic pieces for identification (...which has included over 100 drawings of crane-fly genitalia!)

Do you spend much time studying wildlife?
A lot of my time is spent studying insects and other wildlife, often from observations in the field or from keeping live specimens as pets and inspiration! I am easily drawn to a new focus of interest, so I'll often move from illustrating one particular group of insects for a couple of months to another, constantly finding new things which grab my attention. From an artistic point of view this can often be based on the aesthetic qualities of a species, but as I've mentioned it's all the other aspects which really build up the fascination - including any folklore, cultural connotations, or historical importance.

What recommendations would you make to someone else who is interested in developing their skills?
I think this has been said a million times, but...practice! It is fundamentally important to continually work on whatever it is that interests and drives you to progress, especially in any artistic field where so much of any final piece can be subjective or worked in a personal style. There are always things to be inspired by and learn from, and it's this which should fuel the work and imagination. It can also take a great deal of experimentation with different tools and techniques to find something which best suits you and the type of work at hand, and of course this can change over time or from piece to piece!





To see more of Carim's work, check out his website www.carimnahaboo.com

Gideon Knight-

Young Wildlife Photographer of the Year

2016 Grand Prize Winner

New Nature talks to award-winning photographer Gideon Knight.

Photo: Gideon Knight

"It wasn't until I was eleven years old that I first began to truly appreciate the natural world. My interest in nature began, as it has with many others, by being captivated by the small birds that I saw in my garden, and it wasn't long before I would sit by the window with my small pocket camera for hours at a time, trying to record the moments that I saw. Although much has changed since then, that goal still remains for me; the natural world is an incredible and unpredictable thing, with each moment comes the possibility of something new and wonderful, something you may never see again. Capturing these moments in a photograph can allow you not only to relive the experience for years to come, but also to share it with a wider audience.

I do almost all of my photography at my local park in London, which I've been going to since I was young. These days I usually visit 3-4 times a week to take pictures. Having a local 'patch' is really important in wildlife photography as it allows you to get a great understanding of what species you can hope to see, and how and when to photograph them. This added insight will allow you to experiment more, and expand your creativity with your images and photography style, to create new and outstanding shots."

For more of Gideon's award-winning images visit www.gideonknightphotography.zenfolio.com

JOB FOCUS

This month, Dan Jarvis tells us how he got his role as Welfare Development and Field Support Officer at British Divers Marine Life Rescue.

Images: Dan Jarvis

Tell us a bit about your role.

My responsibilities include updating the volunteer database, processing and cataloguing stranding reports, dealing with calls, assisting with the assessment of animals, updating social media, dealing with media requests, giving talks to the community, organising events, and producing an annual summary report on our seal rescue activities in the U.K.

I am also currently reviewing our seal rescue training and protocols, rewriting parts of the Marine Mammal Medic course and handbook, creating a new seal rescue pocket guide, developing Medic training, investigating potential wildlife rehabilitation centres and veterinary surgeries to expand into taking seals for care, and producing protocols and leading with the coordination of the national multi-organisational response to potential disease epidemics that may affect seals in the future.

How did you get into this area?

As well as my qualifications, I volunteered with Cornwall Wildlife Trust's Marine Strandings Network and trained as a Marine Mammal Medic with British Divers Marine Life Rescue. I volunteered at the Sanctuary whilst at college and worked nights. After graduating, I worked part-time at the Sanctuary, eventually becoming an Animal Care Assistant.

What skills do you need for your job?

Previously, I worked at the Cornish Seal Sanctuary for over ten years. I also hold a Biology and Management of Marine and Freshwater Ecosystems, a bachelor's degree in Marine Biology and Aquatic Ecology, and an online postgraduate certificate course in Marine Mammal Management from Nova Southeastern University in Florida. These were all gained whilst volunteering with the Sanctuary, Cornwall Wildlife Trust, Cornwall Seal Group and Research Trust and other organisations to build my first-hand knowledge and experience.

You need a high level of organisation, communication, and initiative, with good time management and prioritising abilities. A decent level of physical fitness and stamina is also helpful for the practical parts of the job!

Which recommendations would you make for someone seeking employment in a similar role?

A degree or similar can give you background knowledge and practical field skills. However, to stand out you need to demonstrate you've had the initiative and motivation to go out there and do something to better yourself. I've seen hundreds of C.V.s with statements like "I am passionate about nature" and "I am hardworking and reliable"- that's super, but if you don't provide evidence to back those up, you're not likely to get more than a glance from a prospective employer browsing potentially hundreds of applications. Try to get a broad range of experience – helping at your local horse-riding stable or animal rehoming centre once a week shows commitment and loyalty while you learn how to behave around animals and people. Do a good job and eventually this can turn into them relying on you to help teach new volunteers, giving you the chance to gain confidence in teaching and supervising others. These are called 'transferable skills' and are very important for your C.V. Once you are confident, consider taking on extra responsibilities. After a few years at the Sanctuary I took over the additional role of Work Placement Coordinator, whilst creating a full conservation plan for both on and off-site activities and staff volunteer opportunities. This bagged us a local award for 'Best Wildlife and Conservation Project' which was voted for by the public, and gained me an award for 'Environmental Hero' of the year. When an international marine conservation charity called the Sea Life Trust was created, I joined the plastic pollution working group and became its chairperson, working to review and reduce plastic use. My point here is not to gloat, but show that even this far down the line in my career, I haven't stopped trying to learn more. I don't think I'll ever reach a point where I'll think I've done enough.

What piece of advice would you give to young people seeking jobs in conservation?

Patience is a virtue. Jobs are few and competition is high, so expect some disappointments particularly when starting out. Whilst this may be discouraging, don't let it stop you from trying to achieve your dream. You may have to take a completely unrelated job while you are applying, but this shouldn't mean an end to your true aspirations. Stay involved with local groups and organisations as they'll be your best chance of getting a foot in the door, and make use of spare time to keep gaining that all important personal experience. It might take a long time to get to where you want to but it'll be more rewarding when it does.

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

UNPAID INTERNSHIPS

Daniella Rabaiotti tells us why unpaid conservation internships are detrimental to conservation.

We have all seen those adverts on job sites;

> Come and work for *exciting conservation organisation* in *exciting country* doing *exciting conservation stuff*!
>
> **Job requirements:**
> *giant list of skills, months or years of experience, potentially postgraduate degrees*
>
> **Salary: None**

Increasingly these sorts of positions ask you to pay to work, whether this is by funding your own flights, or actually paying the conservation organisation in order to gain experience. And it is not just for the exciting posts in exotic countries. At a careers session at a recent conference PhD students were advised by a senior member of a large conservation organisation, that the way to get a job in conservation after their PhD was to do data entry – for free! As someone who has done an awful lot of data entry, both as a job and for research, I can tell you the skills involved are pretty much the same wherever you do it, and you can get paid up to £15 an hour for the privilege. Although these 'pay-to-work' or unpaid jobs are not confined to the conservation sector, they are particularly common in conservation and ecology. One survey found that over 30% of jobs posted to one conservation jobs site were either unpaid or 'pay-to-work'. Whilst many websites advise that if you want a career in conservation you should undertake some unpaid work, I would argue that these unpaid placements not only devalue your skills, but also harm the conservation sector. I would also argue that you don't need to do them. So far I have managed to gain the vast majority of my skills (fieldwork, data entry and analysis) through either university or paid work.

I have paid to do outdoor activities and expeditions in the past, notably as part of my gap year. I worked to pay for them and they were short term. They mostly involved hiking around South Georgia on top of glaciers, with conservation activities thrown in because no one else was around there to do them. This highlights the fact that there is a fine line between positions that may be harmful or exploitative and those where you give some of your spare time to gain beneficial new skills. Many advertised positions are for a year or more. I am not criticising giving up your Saturday to learn how to ring birds, for example, or doing a short volunteering stint during your university holidays. However this line is by no means clear cut - I'm sure a number of people would argue that what I did on my gap year was exclusionary for many people.

So why are unpaid positions bad for conservation? Well if you are only able to employ people with the financial means that allows them to take part in unpaid work, you won't necessarily be getting the best candidates. You can argue that if someone is willing to work for free they are clearly more dedicated, but I don't think that this is true. I'm sure there are plenty of dedicated conservationists who simply require paid work to get by, as they might have loans to pay off or family members to support. By making job positions unpaid, the conservation sector faces losing the skills and knowledge of many people who cannot afford to work for free. Unpaid work discriminates against those in more difficult financial positions – leading to conservationists often being a very homogenous group of middle class white people. If most people working in a sector are from the same ethnic and financial background, you may have created a group of people who hold narrower perspectives and experiences – something which will be harmful to the way conservation works in the future.

Ultimately if the conservation sector is going to have access to the best people and the best ideas, it needs to start paying for them, and I believe the sector will benefit if it does.

Why Brexit Should be at the Top of the Conservation Agenda in 2017

Ben Eagle explains the opportunities Brexit holds for conservation in the UK.

2016 was a year of shock and bemusement as the global political climate fluctuated beyond belief and events that were previously thought unthinkable crashed their way into the reality of people's lives. It was a year that both created and was driven by uncertainty and it will surely be noted by future historians as a game changer. In November Donald Trump became the President elect of the United States, fuelled by his agenda of 'making America great again' (whatever that means). Six months beforehand, The United Kingdom voted to leave the European Union, triggering the resignation of Prime Minister David Cameron and a change of personnel at the top of British politics. We were assured by the new Prime Minister that 'Brexit means Brexit' (whatever that means) and that Article 50 will be triggered by the end of March 2017. Elsewhere, anti-establishment politics seemed to be on the rise throughout the west, Narendra Modi took radical steps to reform the Indian currency, Syrian cities continued to be bombed to near obliteration, Zika virus spread around the world and most countries experienced at least one terrorist attack of some kind.

What does 2017 hold? Could Scotland once again seek independence? Could Le Pen become le président de la France? Could far right parties rise in the Netherlands or Germany? Will the UK remain a member of the single market? Will Donald Trump build his wall? Will he make Mexico pay for it? With all of this going on, how do conservationists make the case that the natural world needs to remain high on the political agenda? With so many other things to distract the eyes of policy makers, you might not be surprised to hear that we have a huge challenge on our hands.

Environmentalists were certainly not silent on their subject in 2016. There was a lot of noise created and at least some of these conversations emanated beyond the immediate conservation community. One by one, the countries that attended the Paris Climate Conference have ratified the agreement, with 115 out of 197 having done so at the time of writing. In July, A Focus On Nature, the UK's largest youth nature network published their Vision for Nature report, establishing how and why they want to see a healthy and prosperous natural environment in 2050. Then, in September, a partnership of over 50 conservation organisations published the second State of Nature report which, depending on your perspective, made fairly depressing reading, although perhaps not quite as dismal as State of Nature 1, again depending on your perspective.

Without a doubt however, in 2017 the biggest challenge (and opportunity) for conservation in a UK context will be, and should be, making sure that wildlife is safeguarded through an effective new British Environmental Policy and that current protective legislation is not watered down during the Brexit negotiations. Many of us might be tired of talking about Brexit, but we mustn't stop, least of all now. 2017 is our opportunity to get people talking about nature, conservation and the way land is managed in Britain like never before. In terms of spending, approximately 40% of the EU's budget is currently spent through the Common Agricultural Policy and about 3.1 billion euros of this comes to Britain in the form of farm (and general land management) subsidies. Countryside, farming and conservation spending is not going to go away. There is a chance (and perhaps a likelihood) that it will be lower than at present, but if we make a positive case, there is an opportunity for spending to be more targeted and effective.

Brexit is an opportunity to design the kind of environmental policy that conservationists have wished for years, one that puts wildlife at the forefront of decision making. Land management is about compromise, and most conservationists are fully aware that the countryside needs to be a working food production landscape as well as providing for the needs of various species. However, the figures in the State of Nature report suggest that the balance has tipped grossly in one direction and the way that we are managing land is having a detrimental impact on species abundance. A change is required. Greater spending should be channelled into supporting projects that work on a landscape basis and are targeted towards specific aims, with allowance for long term monitoring to measure success. In terms of legislation, statutory protection should not be watered down and the protected areas that are currently designated – the SSSIs, SPAs, SACs etc. – should not be infringed upon. We must make a case for not only upholding existing legislation, but improving its impact and meaning for people.

> "Brexit is an opportunity to design the kind of environmental policy that conservationists have wished for years."

It is unlikely that a better opportunity will come our way in the immediate future to make a case for safeguarding and actively improving the health of the natural environment in Britain. I for one feel that I probably should have done more in terms of campaigning to remain in the European Union while the referendum campaign was going on. Like many of my immediate social and professional circle, I didn't see Brexit coming and so the urgency to campaign was not at the pinnacle of my personal agenda. The polls proved ineffective and those of us on the Remain side were lulled into a false sense of unreality. None of this matters now however. As numerous cabinet ministers have said, with a retronymistic nod to Alexandre Dumas, "we're all Brexiteers now". We need to unite and find a path that works for us all, including wildlife. The debate regarding the future of conservation, for that's what this is, must involve all those who have interests in land, outdoors and nature, from farmers to birders, ramblers to shooters and scientists to policy makers. Together, we must find common ground and establish a vision for the natural world and a plan for how we make it a reality.

Brexit: Reversing Conservation Efforts in the UK

What could Brexit mean for conservation laws in the UK? Jessen Shah explains

Since the 1970s, the UK has been subject to much environmental legislation from the EU, including the Water Framework Directive, the European Climate Change Programme and the Birds and Habitats Directives. Thus far, the apparent 'europeanisation' of environmental legislation in the UK has been having a profoundly positive impact on conservation. However, the 23rd June 2016 may have changed everything. When the British public voted to leave the EU in the advisory referendum, it suffices to say that the environmental consequences were of little concern. Well, they should have been and here are just some of the potential consequences.

A UK departure from the EU may put at risk long-term strategic conservation efforts, which operate at an international level. The Birds and Habitats Directives led to the creation of 270 Special Protection Areas and 653 Special Areas of Conservation in the UK, which are all currently subject to strict legal protection. All of these sites form part of a much larger continental network of Europe's most threatened and valuable species and habitats, known as the Natura 2000 network. When the UK 'takes back control', these areas will lose their legal protection and will be at the mercy of our consistently anti-environment government. This could threaten the Natura 2000 Network, which covers around 18% of land in the EU, as well as the strategic conservation goals made at European level.

Through Brexit, the UK doesn't just stand to lose essential environmental policies but also funding for crucial environmental, conservation and climate action projects. Since 1992, the EU has contributed over €240m towards environmental projects in the UK. Just last year, the UK won an EU conservation award for restoring biodiversity and improving water quality in the Peak District Moors, an important Natura 2000 site. This restoration of previously damaged blanket bog was feasible due to a €5m contribution from the EU LIFE+ programme. Following the UK's departure from the EU, it is likely that the economy will take a turn for the worse and thus, the environment will drop further down the political agenda. The loss of EU funds combined with a potentially crippling UK economy would be disastrous for conservation in the UK and indeed the environment more broadly.

Now for something positive. Amidst increasing Brexit fears, by far, the biggest saving grace for conservation in the UK came when the Prime Minister announced plans to introduce a 'Great Repeal Bill' in the next parliamentary session. If passed, this would see EU legislation converted into British law, including the quintessential Birds and Habitats Directives. There will still be challenges however, primarily over how the government will be held to account in the absence of the European Court of Justice. Another positive - Brexit gives us the chance to finally be free of the EU's biggest environmental failure, the Common Agricultural Policy. Leaving our hillsides bare, funding uneconomical farming and the drainage of wetlands; we can finally replace this disastrous policy with a sustainable agricultural policy based on something like agri-environmental schemes, which improve farming practices while increasing biodiversity.

Following Brexit, it is likely that we will see a reverse in funding and legal protection as well as focus on conservation in the UK. That said, there are opportunities to replace the Common Agricultural Policy with a more sustainable system and to maintain or even build upon EU environmental legislation. The likelihood of this? I'll leave it to you to decide.

THE EARLY BIRD CATCHES THE WORM

Robyn Womack tells New Nature about her research into the circadian clocks of great tits.

How do animals tell the time? Apart from the famous White Rabbit from Alice in Wonderland, I know of no animal that carries a pocket watch. Yet we can see daily patterns of behaviour in wildlife, such as the colourful dawn chorus of birds or the frantic flying of bats at dusk. If you've got a noisy male blackbird in your garden, you will know he starts his loud morning sing-song at the same time each day, with surprising accuracy. "Just like clockwork" you might say – and you wouldn't be wrong. Like us, animals, plants, fungi and most other living creatures, have an inner 'body clock' with the main time-keeper in the brain. Daily changes within our environment, such as the light-dark cycle, set the timing of this clock and tell us it is time to rise, sleep and eat, among other things. Clocks tick with a rhythm of around 24 hours, and bodily cycles that follow this pattern are called circadian rhythms (from circa diem 'around a day' in Latin). Many bodily functions have a circadian rhythm, such as digestion and body temperature changes, along with behaviours such as the start of morning feeding activity and the dawn chorus. It is the circadian clock that tells animals such as birds to wake up and start singing at the same time each day.

But why is it useful to be able to keep track of time within the body? In short, syncing up our bodily functions with cycles outside the body allows us to anticipate and prepare for changes in our environment. For example, morning daylight tells us it is time to wake, and ready the body's digestive system to receive food (i.e. breakfast). This is very efficient – the circadian clock is so successful that its inner cogs remain much the same from insects to birds and humans, and have been steadily ticking for the last 2.5 billion years of evolution.

Although the study of clocks (chronobiology) is not a new subject, we still know very little about the body clocks of wild animals and how these work in natural environments. For my PhD, I am studying the body clocks of wild birds in one of the last semi-native forests in Britain, a beautiful lush oak forest in Loch Lomond and The Trossachs National Park, Scotland. I am focusing on one species; the great tit *(Parus major)*, and am carrying out one of the first studies of daily rhythms of behaviour and genetics in a wild animal.

My field work is based up at the University of Glasgow's field station, the Scottish Centre of Ecology and the Natural Environment (SCENE).

A 13 day old great tit chick.

Here, we have around 500 nest boxes, with many of the residents being blue tit and great tit, with the occasional redstart and pied flycatcher making an appearance! Every spring, the Glasgow bird team and volunteers monitor all nests at the field sites from nest building to egg laying, chick hatching and finally flying the nest.

For my research, I collect information on the daily behavioural patterns of nesting great tits. Using temperature sensors carefully placed next to eggs, I record egg incubation activity by females. I also use nest box camera footage to study daily patterns of parents feeding their chicks, looking for peaks of activity throughout the day and similarities between other great tit families. Lastly, I take small blood samples from the fully-grown fledglings for later laboratory analysis, so I can check for parasitic diseases and measure levels of a variety of genes involved in controlling the body clock and bird health.

So why is it important to study clocks? Many species are now declining within the UK, with much of the blame placed on habitat changes. One such habitat change is the rise of urbanisation, and with it light pollution. Artificial light at night is particularly damaging as it confuses the body clock into thinking it is daytime, which is why it is so hard for us to sleep after an evening of looking at screens! Disrupting normal body clock rhythms in this way leads to many health problems in humans, such as obesity and mood disorders to name just a couple. Given that we don't yet know if wildlife is affected by artificial light in the same way (it probably is, think of the baby turtles from Planet Earth II), I am also studying great tits nesting at our city nest box site in Kelvingrove Park, Glasgow, to see what effects light pollution is having on body clocks and the health of urban birds.

Snapshot from one of the nest box cameras of a parent great tit with a caterpillar.

Ultimately, studying the body clocks of wild animals will shed more light on the complex interactions of wildlife with the environment - especially important given the current state of nature.

And the next time you have a rude awakening by the blackbird in your garden, you can blame his circadian clock!

One of Robyn and her team's research sites at SCENE.

Join the Madding Crowd, with Simon Davey

Words and images: Sophie May Lewis

Sophie May is a writer with a passion for engaging people with the natural world. Bird watching is where Sophie May's interest in natural history began, and something that has been part of her life since childhood. The Isles of Scilly worked their magic on Sophie May as they have on many birders and tourists over the centuries. Her first visit was in October 2014 when she visited for 4 weeks, working as a volunteer with the Isles of Scilly Wildlife Trust through the autumn birding season. It was during this time that Simon Davey's book 'Scilly Birding: Joining the Madding Crowd' fell into her hands.

I am not a twitcher. A fact that I will defend passionately to anyone who will listen. Nonetheless, I am not immune to the lure of the thrill of seeing a rare bird and in this I am not alone. Birdwatching as a hobby has seen a significant resurgence in recent years; it is no longer seen purely as the domain of anoraked middle-aged men with high-tech optics. These days, the flocks of birdwatchers that crowd around the lost and disorientated 'little brown jobs' that collapse onto our shores, are becoming more varied and inclusive. However, there is one phenomenon that continues to hold its position as the highest and nerdiest right-of-passage for the truest twitcher: the Scilly Season. I found myself in the midst of this birdwatching 'festival' one October, unintentionally following in the footsteps of fellow uninitiated birder Simon Davey. Unlike my own experience of an unusually quiet season, Simon was drawn into the centre of all the peculiarities, thrills and discoveries that are quintessentially 'Scilly in October'.

"Scilly Birding: Joining the Madding Crowd" is a true, autobiographical account of the author's first visit to the Isles of Scilly, and his experiences of the birdwatching on the Isles of Scilly during the famous October migration season.

From the outside, the world of birding and particularly the more intense and competitive world of twitching can seem bizarre and obscure. In many ways, and I am sure even the most obsessive twitcher would agree, the idea of racing around to 'collect' a list of the most and best bird species sightings when you could be sitting with your feet up, a cup of tea, a slice of cake and the Sunday papers, probably actually is bizarre. Most birders would point out that this is balanced by the scientific value of observing birds and recording numbers and locations but even this wouldn't completely wipe away the sceptical look on some faces. We insist: "It's not all about lists. Really"…. That is until you come to Scilly in October.

It is amazing, and probably a behavioural-analyst's dream, how the gathering together of birders onto small islands, has the effect of concentrating the list-ticking urge and suddenly seeing each and every bird species that pops up in the bushes or over the waves, becomes the most important thing of all, and not seeing it, especially when everyone else does, feels like failing an important exam or a personal insult.

Simon Davey's narrative takes us back to the heyday of Scilly Birding, the 1980's, when several hundred more birders would descend on the islands

than do today, and yet for anyone who has visited the Isles of Scilly in October, the image that Simon's words paint is remarkably familiar. With each turn of the page the reader can follow a day-by-day account of Simon's journey from preparations and trepidations, up every thrill and down every disappointment, until the satisfied slightly smug feeling of the journey home and that last twist, that hints of that fact that the trip might be over, but the birding doesn't simply stop. As a birder myself, on my own first trip to the Scillies, I can relate to the heartfelt roller-coaster of emotions that Simon experienced; the tension, the frustration, the downhearted disappointment, the walking-on-air joy and the smug after-glow of success. The book is not perhaps what I would call a classic of English literature, with the occasional repetitive use of phrases, but it does have a conversational quality and captures the essence of the subject matter, drawing you in the way a story over a pint in the pub of an evening might do. I rather like its imperfections as it brings a reality and personal touch to the words.

For a non-birder the attraction of the book may not be immediately obvious, but enjoying the story of Scilly birding does not require reading it wearing a green anorak, a woolly hat and balancing the book on a pair of binoculars. Simon Davey himself, although a keen birder and naturalist, and a professional biologist, was visiting the Isles of Scilly Birding season for the first time, and so, the novice or non-birder reader, can find solace in the fact that the author too has to seek explanations of the unique language and etiquette of the twitching world, and as far as planning for birding success goes, doesn't always get it right.

Scilly Birding was an enjoyable read; I know that I chuckled or nodded knowingly in recognition more than once.

'Scilly Birding: Joining the Madding Crowd' by Simon Davey is out now. £8.99 Brambleby Books.

CITES Conference 2016: A Summary of Events

Thomas Broom

Another year, another CITES (Convention on the International Trade in Endangered Species) conference discussing the most important issues surrounding the global wildlife trade. In case you missed any of the key decisions, here's a quick summary:

For those who haven't heard of the CITES conferences before, the CoP (Conference of the Parties) takes place once every two or three years, and is a meeting of all 183 member parties of CITES. CITES itself is an agreement between governments concerning the international trade in animals and plants that has been around since July 1975. The convention, as well as passing legislation, also categorises species into three Appendices – with Appendix I containing species most severely threatened with extinction, where close control of trade is needed most. The conferences usually involve debating proposals for certain species to be moved between Appendices, which affects international legislation and their level of protection.

So what happened at the 17th CoP, held in Johannesburg from 24th September to 5th October 2016? Well, quite a lot. Certainly the most reported on decision was that regarding pangolins, "the most trafficked mammals in the world". One estimate suggests prices of pangolin scales have increased in price by 250% in only 5 years, which just goes to show how important this issue is. The parties decided that all eight species of pangolin should be moved from Appendix II to Appendix I, meaning any trade in all eight species is now banned under the convention. This is of course good news for conservationists, but it could also raise some potential issues. Enforcement in many countries, where the majority of trade in Pangolins occur, is poor, so this decision certainly doesn't mean an end to trade entirely. What's more, many conservationists are concerned that this decision could lead to trafficked Pangolins fetching more money, which could potentially increase poaching further. We'll just have to wait and see on this one, but it may need to be revisited.

The CITES Appendices

Appendix I:
Contains the species most severely threatened with extinction, and therefore where the most control of trade is needed.

Appendix II:
Contains species not as severely threatened with extinction, but where control of trade is still needed.

Appendix III:
Contains species that are protected in at least one country, meaning legislation is present and required.

Another issue that dominated much of the conference was of course that of the trade in ivory. CITES agreed during this conference that domestic ivory markets should be shut down. And a proposal by Swaziland to legalise trade in rhino horn was also strongly defeated. But it's an interesting argument. Making the trade illegal increases prices and therefore gives more of an incentive to poachers. But then legalising trade could have even worse outcome. The debate continues.

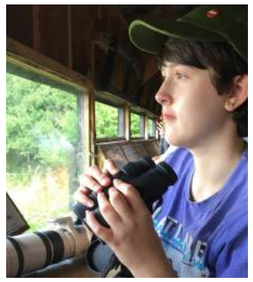
Other important decisions include those on macaques, hornbills, cheetahs, timber and lions. A proposal to move trade in lion bones from Appendix II to Appendix I was dismissed, therefore not banning international trade. Sharks are also slowly being moved higher and higher up in the Appendices, as an increasing amount of countries are accepting the regulation of the trade in shark fins. This year for example, all three thresher shark species were moved into Appendix II, along with nine species of devil ray and the silky shark.

So as you can see, the CITES conferences are certainly busy events, where the fate of the trade of many species is discussed, argued and appealed, and where some of the most important decisions in conservation are made. CITES is no doubt an important part of international conservation efforts, and it'll certainly be interesting to see what is discussed and decided upon in the next Conference of the Parties in 2019 in Colombo, Sri Lanka.

OUR CONTRIBUTORS

This issue of New Nature would not exist if it were not for the passion, drive and commitment of our young contributors. Follow them on twitter, visit their websites and support the future of nature in the UK.

If you'd like to contribute to a future issue, please contact us by emailing **editorial.newnature@gmail.com**



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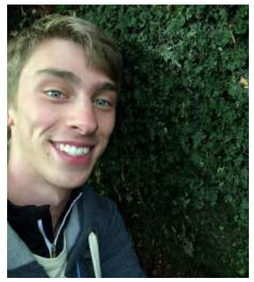

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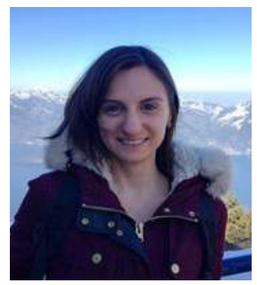

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NEW YEAR, NEW NATURE

Why not make some nature based New Year's resolutions this January?

1. Do some wildlife friendly gardening – Urban areas are great spaces for wildlife, providing there are suitable habitats for them to enjoy. Why not build a log pile, create a pond or develop a mini meadow? Even if you don't have a lot of space, planting some bee friendly window boxes can make a big difference.

2. Learn a new skill or brush up on some old ones. Get a great bird guide, learn to identify mammal tracks or dust off your camera.

3. Think about the environment - Do you need to take the car? Can you recycle that rubbish? Take more note of your actions and see what you can do to help the environment.

4. Get involved in a project or volunteer – even if you can't commit to something long term, head to your local beach for a clean-up or help out for a few hours with a local project– be part of the change.

5. Get informed - understanding what is going on in the world can help you support nature. Watch the news, read other people's blogs and keep up to date with what is going on with wildlife.

6. Wildlife proof your cat – cats can cause a lot of damage to wildlife – get yours a collar with a bell on it to alert birds and small mammals that your cat is coming and give them the opportunity to get away.

7. Tell the world! Teach others about wildlife and help to raise awareness of issues our wildlife is facing – education is the key to change.

8. Skip the pesticides, insecticides, rodenticides...even using basic pesticides can work their way up the food chain. Investigate more humane ways if you need to deal with pests.

9. Get political. See our interview with Chris Packham (page 27) to find out why…

10. Most importantly, get outside and enjoy nature as much as you can! Try heading out at different times of the day; catch the dawn chorus, look for owls at dusk or go bat hunting in the dark.

Image: Alex Pearce

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.

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