

Backwell Environment Trust
Bulletin 37 - Autumn 2018
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A Very Warm Welcome to our Latest Autumn Bulletin

The last six months have been full of amazing discoveries for BET, starting with the excavation of the Warrener's Cottage followed by the uncovering of a nationally important limestone pavement. The BET volunteers have also found the time to restore two lost rights of way, scythe our fabulous wildflower meadows and organise three scything courses for other groups.

BET AGM
Warrener's Cottage



Limestone Pavement
Woodland Report

Scything Workshops
Management Plan

Well, it's that time of year again when BET holds its Annual General Meeting, this time on Saturday November 17th, at 2pm in the Parish Hall. We hope you will be able to attend and find out just what your Trust has been up to over the past twelve months.





BET Annual General Meeting
Saturday November 17th 2018
Backwell Parish Hall

Your trustees will be on hand to serve refreshments and answer any questions you may have about BET and its activities, past, present or future.

The AGM will start at 2pm and, after the short official business, there will be a break for tea, coffee and cakes.

After tea, there will be an illustrated talk by Hayley Herridge from Buglife.



Agenda



AGM minutes from November 11th 2017
The Chair's Report Treasurer's Report
Secretary's Report Woodland Report
Election of Trustees Any other business



Printed copies of the minutes of our last AGM and the annual accounts will be available at the meeting.

The minutes can also be found on the BET website under 'About BET' / 'AGM'



The Warrener's Cottage

The 10th June 2018 marked the 700th anniversary of the setting up of a rabbit warren on Backwell Hill and the records show that Sir Richard de Rodney was granted the right to free warren by King Edward II on 10th June 1318. The warrener would have had a cottage built for him when the warren was initially set up, but the first written references to the cottage only date from the 1780s when the building was repaired after a severe storm. The ruins visible today suggest that the cottage would have originally covered an area of about 45sq metres with the adjacent walled garden (located to the left of the cottage), about 1200sq metres.

Although this archaeological feature in Jubilee Stone Wood was considered to be of great importance, all visitors could see prior to the excavation were a few unimpressive grassy mounds in the woodlands. So to mark the anniversary, in April, the BET volunteers started the delicate task of removing the accumulated soil and fallen stones from the outside of the cottage walls under the expert guidance of Vince Russett, the (now retired) North Somerset County Archaeologist.

BET is hoping to excavate the inside of the cottage in the next few years.

Many tonnes of soil and stones have been carefully removed with all the soil being meticulously sieved for potential artefacts.





Open Day : June 10th 2018

The excavation turned out to be truly fascinating with significant discoveries being made at almost every work session. The many artefacts we discovered have given us a good insight into how the warrener and his family would have lived and worked.

The job of a warrener was a high status position which would have enabled him and his family to afford a good diet. This was reflected in the many animal bones and teeth that we discovered as well as oyster shells.

Many items of pottery and glass were unearthed, some of it of quite high quality.



We know the internal walls of the cottage were lined with lime mortar as numerous flat pieces were found with one rough side and one smooth side.

Although we can't say for sure if the original roof in the 1300s was either thatched or tiled, during the excavations we came across three different types of roof tile ranging from a simple shaped stone design to the more sophisticated clay pantiles.

The warrener may have been a smoker as numerous pieces of clay pipe were discovered.

The cottage may have been heated with coal as many small fragments were found in the soil.



Rare Sub-Species Found on the Reserves

The silver-washed fritillary is a large, fast flying orange butterfly best seen in the many sunny glades of BET's nature reserves. It is one of the UK's largest butterflies and its size and vivid orange colour make it unmistakable. The upper wings are orange with black markings whilst the undersides have the silver streaks which give it its name. Winter is passed as a tiny caterpillar. **Size : 60 - 70mm**
Fight : June to September **Caterpillar food-plant : Violets**



However, a small proportion of females in southern England have wings that are bronze-green in colour and are known as the form 'valezina'. This relatively uncommon variant was seen for the first time this year in Badgers Wood and, although for me, it's not quite got the stunning colours of the more usual form, its very rarity value makes it nonetheless an exciting discovery.

BET's Limestone Pavement

When the BET volunteers were busy reinstating a stretch of little-used public footpath in Badgers Wood in August, they made the amazing discovery of an unusual and extremely rare



limestone rock formation buried under the woodland soil. Further research by members of the Avon RIGS Group and Bristol Naturalists has identified this to be a 'limestone pavement' inclined at an angle of 22° , between 328 and 334 million years old, with its characteristic crevices and gullies, all buried just a few inches under the soil.

Test digging has suggested the limestone pavement may well continue under the soil for large parts of the hillside and so over

the next few years, the BET volunteers will be gradually removing some of the soil to expose more of the amazing limestone formations underneath.

What makes this discovery so fascinating is that the present scientific theory is that limestone pavements were formed by glaciers scouring the bedrock during the last ice age followed by long-term chemical weathering by slightly acidified rain. If you look at maps of how far south it is thought the glaciers reached during the

last ice age and compare it to where limestone pavements are found in Britain & Ireland today, virtually all of the pavements are in areas previously covered with glaciers. The theory suggests that the reason there are no large limestone pavements in southern England or the Midlands is because the glaciers never reached this far south. So this discovery in Backwell has raised a lot of intriguing questions.



BET is working closely with local geologists and they are suggesting that this discovery could well lead to either the theory of how these pavements were formed having to be re-assessed or the reach of the glaciers during the last ice age could be under question as they may have travelled further south than has been previously thought.

So at worst, our pavement will turn out to be a fascinating and mysterious geological enigma, but at best, it may well lead to a re-think on the current scientific theory.

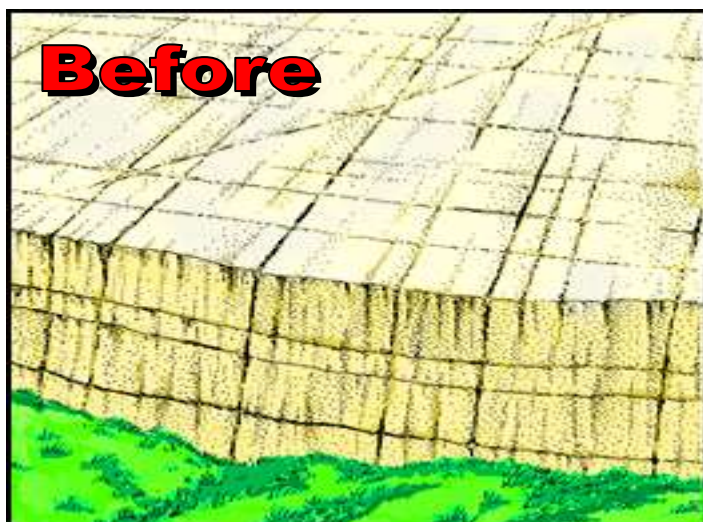


What is a Limestone Pavement?

A limestone pavement is a flat expanse of exposed limestone formed by a combination of chemical weathering and erosion. Most limestone pavements in the UK are formed on Carboniferous limestone and whilst there are superb examples in Yorkshire, they are an extremely rare geological feature in the south of England.

How is it thought Limestone Pavements form?

1. During the ice age, much of Britain was covered by ice sheets and glaciers. During this time, the soil and weaker surface rocks were often scoured away, leaving broad expanses of exposed limestone.
2. With the retreat of the glaciers, moraine material was left behind and a forest eventually established itself. Rainwater became slightly acidified as it percolated down through the soil, which gradually dissolved the limestone surface.



3. Under the soil, the rainwater picked out the joints in the limestone and gradually widened them by dissolving the rock. This created deep fissures called 'grykes'. The blocks of limestone (or 'clints') were also attacked by the rain and small holes and gulleys (or 'karren') formed on their surface.
4. When the ice age finally ended, the soil on the top of the limestone pavement was eroded, washed down into the grykes and removed altogether by the drainage system. The exposed limestone pavement would have been constantly chemically weathered, resulting in the further widening of the grykes and the karren.
5. Badgers Wood's extensive limestone pavement is today buried under 2 - 50cms of soil. Probably sometime in the last thousand years, decomposing vegetation has accumulated on its surface, slowly turning into soil which has consequently buried the once exposed rock surface.

Clints and Grykes

Clints are the blocks of limestone that form the pavement. They are chemically weathered so that their surface is covered with a series of smooth pits and hollows (called **karren**).

Grykes are the fissures separating the clints in a limestone pavement. They may be well over a metre in depth and formed when the joints in the limestone were widened by chemical weathering.



Woodland Report

The past six months on BET's nature reserves have been dominated, as usual, by the weather. In February and March there were the 'beasts from the east' as the whole of the UK was blasted with icy winds, followed by ten weeks of warm, dry weather during the summer. The hot conditions had a huge impact on our plants and many wildflowers were simply unable to flower properly as all their energies were used just to stay alive. Some trees, even in the deep, shaded woodland lost all their leaves from the lack of moisture. Fortunately, when the rains returned, most plants have recovered and quite a few July flowering plants went on to flower in September.

So just what have those hard-working BET volunteers been up to over the past six months?

Hazel Layering

In early spring, we undertook a new task of 'hazel layering' to increase the numbers of this valuable tree. The technique involves first digging a small, shallow trench, bending a hazel branch down, removing a section of bark on the underside, pegging it down and then covering it with soil. Within a year or two, the branch should sprout roots and can then either be cut off from the main tree to plant elsewhere, or simply left in position to allow a new tree to grow. Hazel trees are especially



valuable in our woodlands as they produce a good source of nuts, support many insects and are the perfect mid-height understorey tree - all extremely valuable features for our dormice.

Bridleway/Footpath Restoration

This year we have restored a 'lost' section of bridleway in Jubilee Stone Wood and a public footpath in Badgers Wood. Both appear on the ordnance survey map of our area but there was no actual indication of these paths 'on the ground' running through our woodlands. Whilst the route of the bridleway was fairly obvious, the route of the footpath was unclear. So, after surveying the easiest route up the steep hillside, the path was reinstated and now both paths form a useful link down to Cheston Combe Road.



Wildflower Meadows

Our wildflower meadows got off to a fabulous start in June with our experimental section of meadow which had been topped up with UK-sourced wildflower seed in 2016 being the highlight.



The new meadow was full of flowers and insects but as the drought took hold, the flowers quickly went to seed in order to survive the hot, dry conditions. Many of the wildflowers that were due

to flower in July or August, simply didn't bother this year, they seemed to focus on just staying alive throughout the drought. However, with a bit more rain in September, there was an unexpected splash of colour as some flowers finally managed to flower and set seed.

Scything the Meadows

BET starts the scything of our 1.9 acres of restored wildflower meadows in the late summer to ensure that all the wildflower seeds have had ample time to set. The annual cut ensures that the invasive species such as bramble and tree seedlings are kept in check, whilst removing all the cut material will, in the long term, reduce the fertility of the soil which will ultimately benefit the wildflowers. BET's volunteers just get better and better at scything each year and are well on course for cutting the full 1.9 acres in just 3 months.



New Leaflets

New BET leaflets have been designed and printed and placed into four waterproof dispensers at the entrances to the reserves. The leaflets give visitors some background information on BET and contain a map of the reserves with all the interesting features highlighted. Hopefully this will help visitors find their way around the reserves and raise our profile in the locality.



Automated Defibrillator



BET always carries a comprehensive first aid kit when our volunteers are out working on our nature reserves and always has at least one trained first aider present at all times. However, over the last three years, two other local conservation groups have had volunteers who have experienced a severe heart attack whilst out working. Although the emergency services will always respond remarkably quickly, the sad fact is that for one type of heart attack, sudden cardiac arrest, every minute is crucial. So BET now has access to a fully automated defibrillator which will give a high energy electric shock to the heart of someone who is in cardiac arrest. The use of a defibrillator within the first few minutes of a person collapsing can greatly improve the patient's chance of survival. Hopefully we'll never have to use it, but it could be a real life-saver should the need ever arise.

Volunteer Time

Every year, the BET volunteers freely put in a staggering amount of time and effort, both in the day-to-day running of the Trust, as well as the huge amount of practical work needed to maintain our nature reserves. Over the last twelve months, the fantastic figure of **3,056 volunteer hours** has been recorded - a **19%** increase over last year. Since the Trust began, an astonishing **25,103 hours** have been volunteered - so, once again, a **BIG BET** thank you to you all.

And finally....BET has two thriving volunteer groups that meet **every Monday** morning and on the **third Saturday** morning of each month. **Absolutely no experience** is necessary and it's also great fun, so why not come along and give it a try?



BET's Scything Workshops

Last year, BET was asked to share its scything expertise with another local group which resulted in us putting on a very successful scything workshop for The Community Farm in Chew Magna. Funny how word gets around because this year, BET was asked to put on two workshops for Buglife to support their Urban Buzz project, as well as being asked back to The Community Farm.

The volunteers were taught the correct techniques for hand scything by BET's Peter Speight and in a very short space of time were all scything away, cutting the grass at an astonishing rate.



After scything, the grass was raked up into piles and removed from the meadow using pitchforks. After trying out the three different designs of scythe blade we had brought along and learning about blade sharpening, quite a few of the volunteers were keen to purchase their own scythes to use on their own patch of grassland when they returned home.



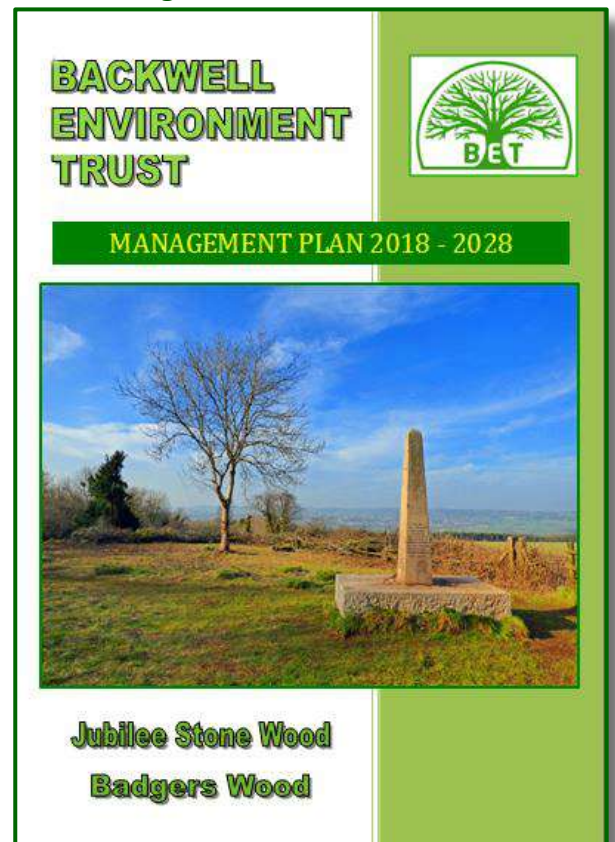
BET's New Management Plan

Over the past six months, BET has been working very closely with an external wildlife consultancy to produce our new management plan which will be the first for Badgers Wood and the second for Jubilee Stone Wood. The plan has been prepared in order to identify our objectives, priorities and aspirations in relation to the current and future management of BET's nature reserves over the next ten years.

Management plans are a core element of nature reserve and woodland management work. The plan will provide the framework within which all future tasks can be carried out and to enable anyone to understand how and why decisions are taken.

This plan describes the geology, history, archaeology, flora and fauna of both reserves as well as their past woodland management. It presents a detailed strategy for the reserves and documents the tasks to be undertaken over the next ten years (2018 to 2028).

To ensure the management plan was of the highest standard possible, BET commissioned external wildlife consultants 'Wild Service' to develop our future management strategy. Wild Service is a partnership between Avon Wildlife Trust and Gloucestershire Wildlife Trust and offers a full range of land management and ecological consultancy services.



Back in March, BET was contacted by the director of a local bike distributor company who had recently discovered our nature reserves and was very impressed with their beautiful setting. He thought they would make the perfect backdrop for some promotional photographs to go into their company magazine. Here are just a few of the many pictures they took.



And finally....the BET trustees are always on the lookout for potential new recruits, especially if you feel you have additional skills or experience that could be of benefit to the group. So if becoming a trustee is something you might be interested in, please do get in touch.