Moor Trees News

Restoring native woodland **autumn 2014**

Director Graham Burton brings us up to date

A lovely summer, now turning to autumn, and our thoughts are turning to this year's tree planting programme.

The three year commitment at Howton Down (Seale Hayne) continues. I have been working with the Conservation Volunteers and Hannah's to plan for the 4,000 or so trees we need to plant before the spring. We have designed and funded a deer fence and a hard standing area for the minibus to enable us to get close to the site. The tea tent will probably be in the old quarry – well sheltered from any stormy weather.

Elsewhere, at Ugborough and Dean Forge we are helping two local landowners with small native woodland schemes, and looking to train village volunteers in tree planting at an open day at White Close Field, Slapton.

The English Woodland Grant Scheme is still under review and the Forestry Commission have promised we will have details this winter, ready for new applications from April next year. Hopefully I can let you all know what the future is for planting grants in the spring newsletter.

As I explained at the AGM, ash dieback has not rampaged across the country though more has been found in the already infected eastern counties of England. The ban on movement of seeds and saplings is still in force though while DEFRA decides what to do next.

I am already looking ahead to future planting schemes. If any of our readers know someone who might want a woodland planting, at no or minimal cost to themselves, please let me know, and I am always looking for any estates or corporate owned land where we can work in partnership to deliver quality woodland. We are also keen to have our own land to plant, as a focus for demonstration and volunteering, but with the price of land as it is we may need a donation or legacy…..

Finally, our much loved minibus is now feeling its age. So we are starting a fund to help us acquire a replacement which we would hope to achieve before next summer. All help gratefully received.

minibus appeal on page 3!

Best wishes
Graham Burton
Director

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Down to earth

Nursery Officer Jon Covey reports on this year's seed gathering and processing

Jon gathers rowan berries

Seed collecting started early in august with a walk around Hembury woods to collect birch, rowan, alder buckthorn and blackthorn.

It was rather early to be picking sloes (blackthorn berries) and the single seeds inside were quite small.

...rather early to be picking sloes

These seeds have been stored separately to monitor germination rate. With most of the tree seed we collect it is best to wait until the seed is ripe and fully developed for a better chance of successful germination.

The fruiting of trees can be very erratic and unpredictable. Last year the oaks were very fruitful. For example, at Newbridge we collected 6,000 acorns in 90 minutes! In contrast, this year there have hardly been any acorns to be found in any

...an abundance of acorns at Hembury wood

of the ancient woodlands **Moor Trees** volunteers have visited. In fact w e were just about to give up hope of finding a decent crop until we revisited Hembury woods where there was an abundance of acorns.

Tree seeds cab quirky. For instance, along with the live seed, a large proportion of empty and dead seeds can be produced at the same time. In a poor crop year a large proportion of seed is unlikely to ever germinate. Whereas in a good crop year a much higher percentage will sprout and grow.

Seed processing has been underway for some weeks now. The berries that we collect from blackthorn, hawthorn, rowan, alder buckthorn,

.volunteers process seeds in the sunshine

guelder rose and holly would, in the wild, be eaten by birds and eventually, having gone through the bird's digestive system, the fleshless seeds would be deposited sometime later away from the parent tree. The flesh around the seed inhibits germination so to to replicate nature, we have to remove it completely from the seed, then wash them in water to remove the residue and then leave to dry, but not dry out completely.

...the flesh around seeds inhibits germination and has to be removed

After this process most seeds are stored in the fridge (to replicate the winter cold) in a container mixed with slightly moist compost/ vermiculite medium.

The circle of life is complete early in the spring when the seeds emerge from their winter dormancy in the fridge to be sown in trays to welcome in the increasing light and warmth with the growth of a pair of cotyledon leaves.

Work in the nurseries carries on all year round. This year we have been using the excellent woody compost from Sustainable South Brent as a mulch around all our young tree saplings. It has been very good as a weed suppressant, for retaining moisture in the soil in a very dry summer and enriching the topsoil with organic matter to give all our young trees a noticeable flush of strong vibrant growth.

Many thanks to Tony Glynn Scaffolding who have kindly donated three tonnes of used scaffold boards for remaking the nursery beds at Broadley and Dartington this year. Many thanks also to Brian Daniel for collecting and delivering them to both nurser-

Minibus Appeal !

Sadly we will have to send our mini bus to the great scrap yard in the sky sooner rather than later. It has given us sterling service and covered well over 160,000 miles in its time with us but *'bits are starting to fall off',* rather like some of us, and we will need to invest in a replacement.

This will not be new – a well serviced, pre-loved bus would do us fine but we may still need to raise £5-6,000 to ensure we can acquire something suitable. It will need a tow bar for our trailer and have 15 seats to carry the volunteer teams (anything bigger would be too unwieldy). Brian tells me it needs to be a Ford Transit as other models are simply not so user friendly and practical.

You can help in a number of ways:

- Donate to the mini bus fund by sending a cheque to the office or use the donation facility on the web site.
- Keep an eye out for us: any other charity disposing of a low mileage bus, any business looking to sponsor a local charity etc.
- If you know of a source of grant aid for buses, please let me know. Many funding trusts specifically discount them from their charitable donation programmes.

Thank you – any support would be most welcome!

AGM

This year's Moor Trees' AGM was held at Leusdon Memorial Hall . Matt Underwood was there.

This year's annual general meeting took place in Leusdon Memorial Hall, set in beautiful wooded moorland near Poundsgate. It was a balmy, if not slightly grey September afternoon and the atmosphere of the hall, like the weather outside was a warm one.

The AGM is always an opportunity for trustees to meet members

The AGM is always a great opportunity for the trustees to meet the members and the volunteers, and share thoughts and ideas; and this year was no exception. There was a good turnout amongst members, all of whom were keen to hear how the charity has developed over the last twelve months. The meeting was led by our chair Janet Cotter who gave a highly positive overview of events at **Moor Trees**. Our director Graham Burton gave a glowing report of all of our activities. This included updates of the planting at Seale Hayne, and the ongoing work at Dartmoor Prison, as well as potential future projects. All of the current trustees were re-elected, and the meeting was met with the general approval of the members. Volunteer Certificates were presented which included for the first time ever a certificate for an astonishing 500 hours, presented to Jon Covey – an incredible achievement.

After a lunch kindly provided by Sue Burton; a walk was taken down to the surrounding woodland for some seed gathering. Although acorns were thin on the ground (a grand total of two found, I believe!), the crops of hawthorn and hazelnuts were bountiful. All that remained afterwards was to stroll back to the hall for afternoon tea and scones. As in past years the AGM was a resounding success and was much enjoyed by all. As well as being an important date in the calendar for serious matters of business, the meeting is a chance to reflect upon everything which **Moor Trees** has achieved and to celebrate the work that we do and will continue to do in the future.

Native trees

Graham Burton continues his series with birch trees

silver or weeping birch

downy or moor birch

Many people imagine that we have a single tree in the UK called the **birch** although there are in fact two UK species – **silver** (*Betula pendula)* and **downy** (*Betula pubescens).*

Both are genuine natives, early colonisers at the end of the Ice Age. The **silver**, which prefers dry woodlands, downs and heaths, has papery-white bark – almost pink in young trees – distinguishing it from the **downy birch** which has reddish bark that turns grey with age and is usually found in wetter habitats in the uplands.

Most of the **birch** trees found on Dartmoor are actually **downy** rather than **silver**, though look for the 'weeping' nature of the **silver birch** around some of the car parks on the moor or in drier woods.

To make things more complicated the two species hybridise regularly and so it can often be difficult to identify a single tree as definitely one or the other.

As pioneer species, improving soils to open the way for the bigger forest trees, they are short-lived, with typical life-spans of between 60 and 90 years, although some individuals can live up to 150 years.

Birch woods have a light, open canopy, providing the perfect conditions for grasses, mosses, wood anemone, bluebells, wood sorrel and violets to grow.

Birch trees provide food and habitat for over 300 insect species - the leaves attract aphids, providing food for ladybirds and other species further up the food chain and are also a food plant for the caterpillars of many moths, including the angle-shades, buff tip, pebble hook-tip, and **birch** mocha.

birch tree mocha moth

Birch trees are particularly associated with specific fungi including fly agaric, birch milk cap, chanterelle and the birch polypore (razor strop).

Fly agaric

Woodpeckers and other hole-nesting birds often nest in the trunk, while the seeds are eaten by siskins, greenfinches and redpolls.

Birch has a multitude of historical associations. It plays an interesting part in European folklore where it is associated with death. And it is the national tree of Russia where it was once worshipped as a goddess.

redpoll

The sap makes a clear and refreshing drink that can be preserved as a wine, beer, or spirit. The leaves produce a pleasant tea and an infused oil. It was important to Native Americans for pain relief and indigestion because of the presence in the bark of Salicylic Acid, the ingredient used in aspirin.

From adhesives to wine, baskets to yokes, and boats to vinegar, **birch** has been a boon to people in the cold north for thousands of years.

ivy

Jon Brock sheds positive light on this much maligned plant.

Consider the ivy.

It's a fair bet that most familiar stories about this plant are not exactly positive. Often portrayed as a creeping, suffocating climber that strangles trees and damages property, this plant has had a bad press. Whilst it's true that ivy can, over time, wreak serious damage to manmade structures and needs to be controlled, in the natural world ivy plays a vital role in the health of woodlands all across Eurasia.

Ivy (or *Hedora Helix* for you Latin lovers) is an evergreen, climbing plant which will eagerly scramble up any tree or rock face up to a height of 30 metres. At this size the base of the **ivy** can be as large as the trunk of the tree supporting it. Sinuous arms reach high into the canopy whilst evergreen leaves clothe every branch available.

It's easy to see why **ivy** has gained its suffocating tag as it's not uncommon to find woodlands with practically all the larger trees wearing evergreen coats of **ivy**. However, this does not mean that all these trees are in danger. **Ivy** does not strangle the individual tree, it's more akin to hitching a ride up to the light in the canopy. It's true that occasionally a small tree such as a hawthorn or rowan can be overwhelmed and topple over, especially if covered in snow or in high winds. Much more common is the loss of a single limb rather than the whole tree. Therefore, unlike the aptly named Asian strangling fig which actually kills its host tree (you will often find a cylinder of fig tree with a hollow centre where the host tree once stood), **ivy** uses its host only for support.

Ivy produces yellow/green flowers which

Starting from a seed, via a bird, the tiny plantlet begins its epic journey. Feeling for an upright surface on the forest floor, if its lucky, a mature tree is located and the ascent can commence. Fingers of ivy quickly climb the host trunk using modified rootlets as holdfasts. These stick to the tree bark but do not penetrate the living tree inside. Unlike some climbers which tap into their host's tissues and steal their food **ivy** does not and is therefore not parasitic but produces all its food through photosynthesis. Living in the shade of the canopy, **ivy** leaves are necessarily evergreen, which helps the plant catch enough sunlight to photosynthesise.

Gaining height, **ivy** also begins to gain width with the familiar sinuous stems winding around the host tree. These larger stems do not have holdfasts, they use their own strength to stand up whilst embracing the tree. only the leaf-bearing stems higher in the tree stick the **ivy** to its host.

Ivy is a flowering plant producing yellow/green flowers which ripen into black berries. The timing of this is very important to woodland wildlife as the flowers appear around October, the last large bloom of the year. All manner of nectar-loving invertebrates top up on this last chance before winter and hibernation or migration. The berries also ripen late, around December/January. This in turn provides a new food source when much of the forest's larder is empty, vital to many woodland birds.

The actual physical structure of **ivy** creates habitats for a wealth of wildlife. A mass of tangled stems and evergreen foliage provides numerous nooks and crannies for countless invertebrates to live out their lives. Insect-eating birds such as tits, tree creepers and nuthatches take advantage wheedling out tasty morsels for themselves and hungry broods. Often flying back to nests concealed by or made in the **ivy** itself. In winter the evergreen foliage then provides a snug habitat for over wintering insects and also ideal roosting sites for small birds during cold winter nights.

Therefore, it can be safely said that **ivy** plays a significant role in the health of a woodland, illustrating the interconnection of all life.

Can deforestation affect global weather patterns?

Janet Cotter *explains how deforestation can affect not only local weather patterns but also weather patterns of places far away from the deforestation area.*

Forests, like other ecosystems, provide 'ecosystem services'. These are services people need (such as pollination and flood control) and use, but often don't realise we depend on. They provide us with essential services like the uptake and storage of carbon - reducing human's impact on the climate. Now, new science is emerging on another ecosystem service provided by forests: Their influence on global weather patterns.

Forests are a vital part of the water cycle as they transfer water from the ground into the atmosphere (evapotranspiration), which eventually falls back to earth as rain. It's been known for some time that deforestation weakens this cycle locally. However, it now appears that the influence of forests over rainfall and weather patterns is not just local, but extends to whole regions, and even globally. A new report by Greenpeace reviews studies on these indirect impacts of deforestation and their potential impact on agriculture.

Computer modelling studies indicate changes to weather patterns in places far away from the site of deforestation. For example,

- loss of forests in areas such as the Amazon and Central Africa is predicted to reduce rainfall in the US Midwest at times when water is crucial for agricultural productivity in these regions;
- predicted temperature increases in South America, Canada and Africa as a result of Asian deforestation could impact crop harvests and
- deforestation in Asia could lead to changes in the route storms take over Europe, whilst Amazon deforestation could increase annual rainfall in northern Europe.

This regulation of climate and rainfall might exhibit non-linear behaviour. That is, instead of a steady decline of forest influence on weather patterns with deforestation, there may be little or no noticeable effect for a period but then a sudden change when a "tipping point" is reached. This would be evident in abrupt changes in weather patterns.
We already know that deforestation destroys natural habitats and homes for biodiversity while emitting carbon dioxide into the atmosphere. It's now evident that deforestation can also indirectly lead to impacts on global weather patterns. Although our understanding of the magnitude and extent to which deforestation affects regional and global weather patterns is incomplete, it is clear that deforestation is capable of altering weather patterns far from where

This article was originally a blog for **Greenpeace** who have kindly allowed us to reproduce it here. **Dr. Janet Cotter** is a senior scientist at the **Greenpeace** International Science Unit. Janet is also chair of **Moor Trees'** Trustees.

The Bialowieza Forest

Earlier this year Newsletter editor Paul Harrison was inspired to visit the ancient Bialowieza forest in Poland. Here he gives an account of the visit.

We were in the pub discussing ancient woodlands, as you do, when Graham our director recalled a visit he had made to the Bialowieza Forest which straddles the border between Poland and Belarus. The forest—a mix of deciduous and conifer trees— is one of the last and largest remaining parts of an immense primeval forest that once stretched across the European Plain. Much of the forest is managed but on the Polish side is an unmanaged protected area which has remained virtually untouched by man for hundreds of years resulting in a rich self sustaining ecology only to be found in such a forest. He told us of mammals such as lynx and bison and wolves that inhabit the forest and and of several rare species of bird such as the three-toed woodpecker which can only survive within that type of woodland. I was hooked and determined to make a visit which I did, with my wife, in June.

One of the first things you notice is the amount of dead wood

The complete forest covers an area of 150,000 ha of which the polish part takes up 62,500 ha. 4747 ha of that is the strictly protected unmanaged part of the forest which can only be visited with a licensed guide. We managed to arrange two four-hour visits with a licensed guide - one at 4 oclock in the evening and one at 5 oclock the next morning - the best times to see wildlife.

White backed woodpecker

Entering the restricted zone is a humbling experience—knowing how old and unmanaged it was, how untouched by man, and being aware that this was a self managing ecology developed and finely tuned over hundreds of years. One of the first things you notice is the amount of dead wood about all at different stages of decomposition—a unique feature of unmanaged wooodlands . Dead trees still standing, trees fallen and resting on other living trees, tree trunks lying on the ground almost totally decayed. Our guide told us that it can take up to a hundred years for one tree to totally decay and in the process it supports thousands of species of insects and fungi - and in turn a wide variety of birds such as the three-toed and white-backed woodpeckers.

The forest was not as dark and as dense as I expected and as we walked through it we came upon sunlit glades, where the trees in that part of the forest had all come to the end of their natural cycle and new trees and wildlife were just starting to take their place. And an ideal habitat for butterflies such as the aglia tau and the moorland clouded yellow.

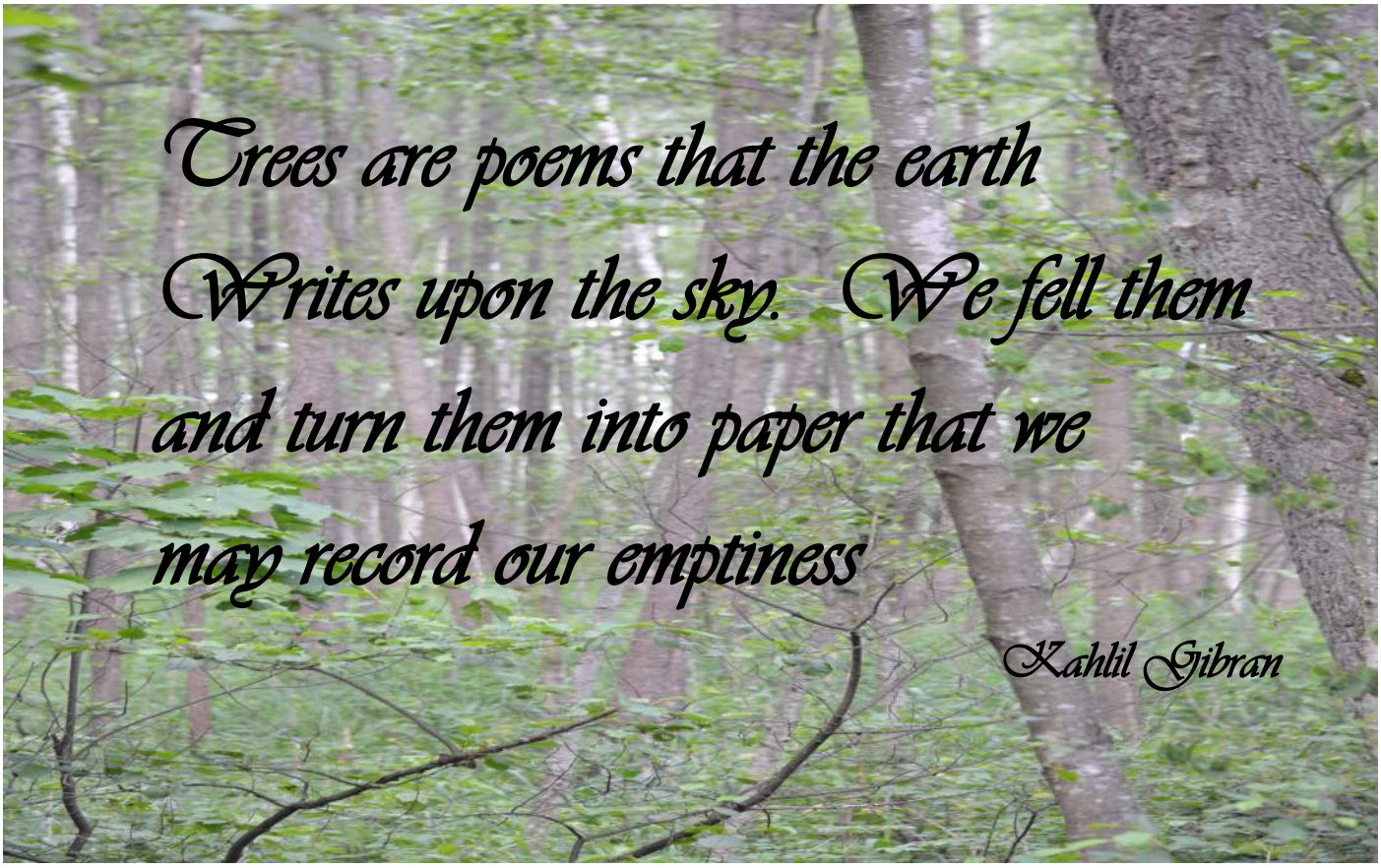
Within the forest community are sub communities with their own specific ecologies, often centred around a particular species of tree. For example, alder carrs - swampy waterlogged areas where the water has eroded the earth around the alder trees leaving the alders growing on little tussocks. An alder carr is rich in ferns and mosses ,fungi and lichen.

We spotted a wide variety of birds during our 8 hours in the forest including red-backed shrikes, tree creepers, tawny owls, red breasted flycatchers, greenish warblers, grasshopper warblers, marsh tits, tree creepers and redstarts.

Alder carr

Mammals that live in the forest include red deer, wild boar, wolves, lynxes, racoon dogs, foxes, otters, badgers, pine martens and polecats. There is also a recently re-introduced herd of around 800 bison (Europes heaviest land mammal) in the forest..

For anyone who wants to experience a totally self regulating woodland I would recommend a visit.



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Edited by Paul Harrison
Printed on paper from FSC mixed sources by the print workshop at HMP Dartmoor