

YR ARDD

MAGAZINE FOR MEMBERS ISSUE 28 AUTUMN/WINTER 2017/2018



Seasonal delights

Celebrating the glorious fruits of autumn



Ensuring a future for our native plants



Honey reveals where the bees forage

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The National Botanic Garden of Wales is a registered charity (no. 1036354) and is supported by the Welsh Government, National Lottery and Carmarthenshire County Council.

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Editor: Mairwen Jones
Design: InglebyDavies.com

Photos: Tim Jones Photography, Carly Green, Steffan John, Bruce Langridge, Andy Shaw, Carl Stringer, Steve Ullathorne, MaxPixel, © Crown copyright (2016) Visit Wales, Steve Horsley/Gregory A. Pozhvanov/Anan Kaewkhammul Nataliaova/Shutterstock.com

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An even warmer welcome using greener energy

With a very busy summer behind us, we are now looking forward to the autumn and winter programme of events.

The ever-changing variety of activities is bringing increasing numbers of people to the Garden, many of whom are making their first visit. A comedy festival, daily flying displays by birds of prey, abseiling down the wall of the Science block – new attractions have certainly prompted many of those additional visits. Yet whatever brings in the visitors, it is surely the stunning vistas of the Garden, and the hard work that goes into creating them, that makes the events and visits so special for the people who come. We feel sure they'll be back another time.

Behind the scenes, it's the investment in the core infrastructure that is essential for the long-term future of the Garden. This year, with support from Welsh Government, we have installed a new climate control system for the Great Glasshouse, Tropical House and the propagation glasshouses. This will help the horticulture team keep the plant collections in the best condition, as well as being a 'greener' use of energy. Good for our budget and good for the planet.

With the Regency restoration work now started and further plans and funding applications well under way, next year is shaping up to be another exciting and dynamic year for the Garden.

Huw Francis, Director



Highlights

Catch up with the news and events in the Garden



Science, Nature and Comedy Festival

This autumn a host of stars including Jim Al-Khalili, Helen Arney, AF Harrold (above, from left to right) and Sophie Scott (contents page) took part in the first ever festival of its kind.

The Garden in September is a wonderfully appropriate place to provoke debate and thought about new scientific revelations and explanations, and to both laugh and learn is a real privilege. Those of us who listened to Robin Ince learned

that you should always, always, hold on to Professor Brian Cox's elbow when crossing the road. If he's struck by a new theory midway, the speed of an oncoming bus will not register with him in any way. Terrifying prospect.

For Bruce Langridge, Interpretation Officer at the Garden, one delight was to listen to a talk by Jim Al-Khalili about quantum mechanics, a subject so thrillingly complicated that if you claim to fully understand

it, you clearly don't understand it. And another topic which fascinated him was genetics: "Much of what I understand about evolution was gleaned from the pages of books written by Professor Steve Jones, so to hear him talk live about the obesity gene was like a footy fan seeing Ronaldo."

The enthusiastic applause and ruminations on the ideas we heard all lead to one simple message: more, please!

DRESSED FOR TAKING TEA

Gentlefolk who fancied a bit of dressing-up received a cordial invitation to take afternoon tea at the Garden this summer – in china teacups and from silver teapots, naturally. The costumes were pure 'Pride and Prejudice', and there was much to learn about dining etiquette, dress codes and, indeed, the food eaten in the Regency period. However, the homemade jams and cakes also evoked lots of memories and stories from visitors about their own, more recent, childhoods, their grandmothers' baking, and simple summer picnics – often enjoyed in a much-loved garden.



There are many reasons to visit the Tropical House, now named Plas Pilipala, not least because it's the grand palace inhabited by our lovely tropical butterflies. It's warm and steamy in there even on the chilliest winter days, and you'll have tantalising glimpses of beauties like the glasswing, *Greta oto*, below. The building itself is also something of a wonder, being designed by world-renowned Welsh architect John Belle who restored some famous landmarks in the USA including New York's Grand Central Station Terminal and the National Museum of Immigration on Ellis Island.



A WINTER HOTSPOT

Events

For full listings, take home or download our events leaflet at botanicgarden.wales/visit/whats-on/upcoming-events/





WILDFLOWER SEED WANTED

Yes, there's a growing demand for wildflowers – highway departments want them on roundabouts, designers want them in urban landscapes, bee-lovers and gardeners prefer them to striped, flowerless lawns. The abundance and variety of wildflowers at the Garden – mainly in our beautiful Waun Las nature reserve – enable us to respond to that need and to generate income for reinvestment.

This year Emorsgate Seeds brought their uniquely designed brush harvester and collected seeds from Cae Tegeirianau (Orchid Field) high up on the nature reserve, collecting a good harvest of yellow rattle, eyebright, buttercup, plantain and crested dog's-tail.

Meanwhile, for fluffy seedheads such as those of cat's ear and hawk-bits, hand collecting is a more effective technique. Ben and Juliana from Coleg Elidyr, who volunteer in the conservation group, collected by hand from our Cae Trawscoed hay meadow. Check the Emorsgate seed catalogue next year and Waun Las seed will hopefully be there.

LOVELY LICHENS



The exhibition we host from January to March 2018 is the work of local artist Julie Ann Sheridan who runs The Last Gallery Studio in Llangadog. Her recent work was inspired by lichens – their colours, patterns and the way their growth works in tandem with other organisms. Her collection entitled 'Symbiosis: Lichens, small but critical' looks at relationships between organisms and at the environments where they flourish. Quite apart from being exquisite forms in their own right, she sees lichens as symbolic: "They serve as a metaphor for how we should live our lives by working together."



Messages in Fairy Wood

Fairy Wood is full of surprises, not least the contents of the post box made by the fondly remembered Les Bryan. Our sorter of post for fairies sees some endearing messages, invariably written on the back of receipts, shopping lists or a Garden map. It's reassuring that the dreams and wishes of children have changed little over the years: 'I wish I had powers', 'I want a horse', 'I wish I had lots of cats' and one very touching request to fairy friends, 'Please keep our family healthy and happy'. The little folk who remain hidden for now behind carved fairy doors will no doubt be doing their best to oblige.



3 OF THE BEST

FUNGUS FINDS - TO MAKE MYCOLOGISTS MARVEL



Ballerina Waxcap
Hygrocybe calyptiformis
A beautiful and rare fungus found in Waun Las nature reserve. Its pink cap splits and turns up, evoking a ballerina's tutu. Every year, we see more specimens in our organically managed meadows.



Wine Roundhead
Stropharia rugosoannulata
This is very rare in the UK but is common in North America where it's considered a culinary treat. It first appeared in the Japanese Garden in 2012 and can now be found in mulch across the Garden.



Jelly Ear
Auricularia auricula-judae
It looks and feels unnervingly like an ear but it's a wild mushroom commonly found on elder trees. Here it's taken a liking to the Wawa tree roots in our Ghost Forest.

Owls after dark

Now that Pembrokeshire Falconry has established the British Bird of Prey Centre here at the Garden, the daily flying displays have been a highlight for families visiting the Garden. All through the summer, children were thrilled to have an owl fly to the glove or to have a photograph taken with a kite, a hawk or even a vulture. Our Winter Wonderland in December will feature owls in their element – at dusk and at night-time, so when you come 'To the Park after Dark' evenings, not only will there be mulled wine and twinkling lights but starring roles for swooping owls as well. And be sure to catch the moment when the owl appears in our Christmas show, 'Tinsel's First Christmas'.



Little beauties



Who better to share the delights of this brave winter flower than **Naomi Slade**, author of *The Plant Lover's Guide to Snowdrops*? Packed with fascinating facts and delightful photographs, this book will inspire you to head outdoors and make the most of this lovely and iconic flower. Our February Snowdrop Weekend features Naomi's guided walks and illustrated lecture. Join her to discover exciting and unusual varieties of *lili wen fach*, as snowdrops are called in Welsh, and find out how they can best be used to brighten up the winter garden.



Glories of the dormant seasons

In autumn and winter the lush growth and swathes of flowers give way to other beauties in the Garden. Against the glow of a low winter sun, there's nothing like the majestic silhouette of a mature tree.

In the dormant season, trees certainly make their presence known, providing wonderful colour in autumn and striking outlines against winter skies. Acers, or Japanese maples, are among the most showy as their leaves change colour and, in the Wallace Garden, we have two great examples of 'Atropurpureum' cultivars, noted for their wine-red hues.

Along the Broadwalk, you'll find the amazing Paper Bark Maple which is native to central China. Its copper orange bark peels into large curls which remain on the tree rather than falling onto the ground. This contrasts with its rose brown inner bark, and orange to red autumnal leaf colours.

Birch has an unfortunate association with caning schoolchildren in less enlightened times but the beautiful line of Himalayan birches along the path in the Double Walled Garden will surely persuade you to love them after all. They have strikingly white bark and some fascinating fungi pop up around their bases in autumn. Whereas British silver birch brushwood was used to make broomsticks, the bark of Himalayan birches was used in India to write ancient Sanskrit scriptures.

These are just some of the trees that command attention. You can pick up a leaflet in the Gatehouse which offers you a short Autumn Tree Trail to follow.





OUR WONDERFUL MACHINE

Have you heard of an Exeter Retort? This is an exciting acquisition because it enables us to produce charcoal from waste wood – and to do so in a fraction of the time taken by charcoal-burners in times of old who would have had to keep their kiln alight for more than 24 hours, setting up camp in the woods and painstakingly controlling how much air went into the turf-covered fire. With this wonderful machine, we can do the same job in 4-8 hours, controlling air flow and using the wood gas given off to fuel the charcoal-making process. It is incredibly efficient, very economical and releases less pollution into the air. So we're all set up to sell charcoal for your home barbecues next season!



WHAT WE DO WITH WOOD

In order to reinstate the magnificent water park that Sir William Paxton created on this site, we have been clearing trees and scrub from the overgrown dams and lakes. What happens to the wood is very important to us, as part of woodland management and learning about sustainability in the longer term. Peter Lee Thompson was appointed in September as The Regency Restoration Team Education and Woodland Officer, and he will work with volunteers to ensure that we make the most of our woodland and the wood that we harvest. Traditional skills such as green wood working and charcoal-making will be learned, as well as the more strenuous tasks of coppicing and hedge-laying.

CHERRY, OAK, AND BEECH

The most sought-after of these for furniture-making is most definitely cherry. A cherry tree that was felled earlier this year was planked using our mobile sawmill (above) and will be stored now before being turned into items of furniture. From beech we have been making simple seats and benches for the Garden, which will rest on oak blocks to stop them rotting too quickly.

WALES ♥ WOOD

The August weekend that centred on promoting sustainable woodland management was a great success and another is planned for August 2018. It's a great chance to catch up with plans for restoration of the parkland and also to meet woodturners, carvers, whittlers and everyone who loves working with wood.

DID YOU KNOW?

Different wood produces charcoal that's best for different purposes. Alder charcoal was traditionally used for making gunpowder, while willow and grapevines (or wisteria vines) made good artists' charcoal.

Fruit from home and away



Apples have been grown in Wales for a very long time and in our Welsh Heritage Orchard you'll see a wonderful variety.

On the west-facing slope of the outer walled garden, you'll find a young orchard that's full of promise. The first trees were planted in 2012 and the collection has been enlarged in subsequent years. Trees are pruned in winter, appropriately fed and, apart from some deer interference early on, appear to be thriving and happy to bear fruit.

This orchard currently contains 42 cultivars, either of Welsh origin or having a long-standing tradition of being grown in Wales. It's a living library which aims to encompass all known Welsh dessert, culinary and cider apple varieties. Sadly, although almost all of the *Malus domestica* cultivars mentioned in literature have been rediscovered, a few may be lost for ever. 'Foreman's Crew' was a variety raised around 1826 by Thomas Seton Forman Esq, of Penydarren Place, near Merthyr Tydfil. It is described as "One of the best dessert apples, with the flavour of Nonpareil and Golden Pippin." The description has survived, but not the fruit.

However, **Blue Barnes-Thomas**, gardener in the walled garden and fruit enthusiast, was thrilled with this year's harvest. His wise advice: "Better to celebrate what we have than lament what we are lacking."



Bananas

Well, these are certainly not natives, so they need their warm wrappings in winter to be sure. Before the first frosty nights of late autumn the Japanese species which you see in the walled garden, *Musa basjoo*, will be enclosed in straw (for the trunks) and then plastic netting and black horticultural fabric for the foliage. The students who do this have a penchant for toy monkeys as decoration – so passing visitors can guess there are bananas inside. Come April, they'll be unwrapped and opened up to the sunshine once more. Meanwhile, in the tropical temperature of Plas Pilipala, banana trees and butterflies alike are enjoying the warm climate all year round.



Protecting our native plants

In the National Botanic Garden, our horticulturists study plants from the whole of Wales – a country which is full of living treasures.

Carmarthenshire has a rich diversity of plants but in several other areas of Wales there are extremely rare specimens which the Garden is keen to protect. Horticulturist **Carly Green** has been working on two such conservation projects, one in Powys and another on the Great Orme, Llandudno.

High up on the Great Orme near Llandudno there is a species of cotoneaster which can only be found in that habitat – *Cotoneaster cambricus*. It used to be abundant on the limestone cliffs but was sought after by Victorian souvenir hunters and collected almost to extinction. There are now just 6 plants left in the wild, growing on the Orme, and the aim is to increase that. The Garden team has been working with Treborrh Botanic Garden, part of the University of Bangor, and with Chester Zoo to reinstate it more widely. So Carly's work in taking cuttings and collecting seed earlier this year was critical.



When you're next at the Garden, don't miss a unique display of wildflowers from four Welsh National Nature Reserves. A five-minute walk from our Stable Block will take you to plants from the Great Orme's **Maes y Facrell** NNR as well as three other sites: **Cwm Idwal** in Snowdonia, **Kenfig** near Port Talbot on the south coast of Wales and the rhos pastures on **Waun Las**, the NNR here at the Garden.

Another conservation project the Garden is involved with is in Breidden Hill near Welshpool where, in Criggion Quarry, a number of rare plants have been identified as a focus for the project. Breidden Hill is a SSSI, a site designated primarily because of the presence of rare flora and unusual habitat. The quarry owners, Hanson UK, are working with conservationists to encourage the populations of rare plant species by removing trees from the crags on which they are found, and encouraging the spread of habitat onto the sides of the quarry. New seedlings of the plants shown below are now being carefully nurtured by the horticultural team in the Garden.

BREIDDEN HILL: 3 RARE SPECIES



Spiked Speedwell
Veronica spicata

This elegant flower is popular in manicured gardens, but its wild relative can be found growing in some very harsh conditions. Beautiful but tough, spiked speedwell thrives best on exposed lowland scree, able to survive heavy grazing and prolonged drought.



Sticky catchfly
Silene viscaria

This colourful wildflower grows in only two locations in Wales. It has been found to release compounds that improve disease resistance in surrounding plants, making it a useful species for us when we replant the Criggion habitat.



Rock cinquefoil
Potentilla rupestris

There are only 10 sites where *Potentilla rupestris* grows wild in the whole of the British Isles. The Criggion population almost became extinct in the 1980s due to quarrying, but conservation work has strengthened the plant's stronghold on Breidden Hill.

Honey samples keep coming



PhD research student **Laura Jones** is urging apiarists to help support the Bee Team and send her samples of honey. Here she explains how her research will help the Garden's science team to find out more about pollinators.



Here's your justification for ignoring the weeds: bees prefer dandelions to most garden plants.

One of the key research areas in our Science department is investigating honeybee foraging, to find out which plants they feed on. By sampling honey from our hives on a monthly basis and surveying the Garden for all of the plants in flower, we can track honeybee foraging through the season and establish their preferences. We use DNA metabarcoding to identify the plants within the honey and have made fascinating discoveries.

Did you catch Rachel de Thame's item on our findings on *Gardeners' World* earlier this year? She was quite surprised to learn that last spring our honeybees relied on hedgerow and woodland species such as willow, hawthorn, oak and dandelion for most of their diet. This was supplemented with a small number of garden plants including cotoneaster, hellebores and spring-flowering bulbs. Despite the diversity of plants provided by the Garden, the honey bees only used a small portion of plants: just 47 genera – or 11% – of the 437 different genera of plants in flower in April and May.

To widen our survey we asked for a 30ml sample of honey from beekeepers across the UK. Beekeepers have been hugely supportive of this project with over 500 samples received so far, including honey from Monty Don's hives. There will therefore be plenty of lab work to undertake this winter, with results available by spring 2018.

Members' patch

Make the most of your membership – not just free entry but discounted courses, free admission to other gardens and lots of opportunities to meet garden-lovers of all ages



Meet a member

NICK THOMAS

Nick is a familiar face in the Garden, popping over every week from his home in Pontyberem. As a member for over eight years he has followed the Garden's development and also the careers of students and apprentices whom he befriends. He was thrilled to learn of one student going on to Kew Gardens and another to Appleton Manor Gardens in Oxford.

- Favourite Season: autumn with its rich colours
- Favourite events: The Antique Fairs and the Food Fairs – "tasters are wonderful".
- Memorable musical performances: "the beauty of coming here so regularly is that I often catch rehearsals as well. I love to listen to Shelley Fairplay on the harp."



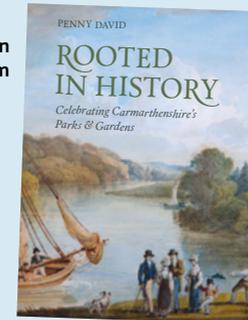
Coffee mornings

October 20th, 2017: the focus will be on apples, with our Heritage Orchard Team sharing tips and tasters

November 17, 2017: garden historian Penny David will share her new book, *Rooted in History - Celebrating Carmarthenshire's Parks & Gardens*

February 16, 2018: Will Ritchie, our curator, will give an illustrated talk on the future of the Botanic Garden Plant Collections

March 16, 2018: Richard Suggett of the Royal Commission for Historic Buildings & Monuments will give an illustrated talk, 'John Nash of Carmarthen'



Four new trustees

Members may well have heard of the immensely talented people who have now joined the Board of Trustees.

Paul Smith is currently Secretary General with Botanic Gardens Conservation International. He worked at Kew from 1997 – 2014 and led on the Millennium Seed Bank Partnership. He now lives in Llanwrda.

Tim Jones has had experience of major projects such as the 2012 Olympic and Paralympic Games, England 2015 (organising the rugby world cup). He is currently Chair of Access Sport.

It's 'Welcome back' to **Gary Davies** who was our interim Director for four months in 2016, and was the Garden's first head of marketing and PR when it opened. He is a consultant in marketing and destination management and lives near Llandeilo.

Rhodri Glyn Thomas is currently President of the National Library of Wales and is a minister of religion. He's a former Member of the National Assembly for Wales and lives near St Clears.

IT'S GOOD TO KNOW ...

that your visit helps us to teach the next generation about sustaining the planet. So thank you for coming!



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