

# European Heritage Gardens Network

## Thursday 7<sup>th</sup> April, 9-10.30am via Zoom

### **The Lost Gardens of Heligan** **Productive Gardens Past, Present and Future**

A 40-minute presentation in two halves:

**Past and Present:** rediscovering and protecting traditional skills and heritage varieties.  
Candy Smit (Heligan Archivist) and Nicola Bradley (Garden Manager)

**The Future:** facing the environmental challenge.  
Alasdair Moore (Head of Gardens and Estate).

### **CANDY – The Past**

#### **1) Aerial shot of Heligan in 2000, after restoration of The Lost Gardens**

Our project here began from a completely unexpected journey of exploration, which was to change our lives. Tim Smit, a successful songwriter and musician, and myself with our small children, had recently moved from London to Cornwall. In 1990 Tim was looking for land to start a Rare Breeds Farm and was introduced to John Willis (a descendant of the Cornish Tremayne Family), who had just inherited responsibility for their long neglected, but formerly reputable Gardens.

The Tremaynes had first moved to Heligan, on what is known as the Cornish Riviera, about 1600 and Heligan House and Gardens were then developed over three centuries by resident Squires, until WW1. Heligan House is at the centre of this aerial view, with Walled Garden, Melon Yard and Kitchen Garden to the north... towards the bottom of the photo.

#### **2) Edwardian Garden Party at Heligan**

Hospitality both to the gentry and to the local community entailed not only the development of trend-setting exotic Victorian Pleasure Ground plantings, but also the year-round management of productive areas. These included a walled garden built of Flemish brick around 1800, with south facing glasshouses, and a 1.8 acre Kitchen Garden dating back to around 1830. Squire Jack Tremayne inherited in 1901, with the gardens in their late Victorian heyday enjoying a national reputation.

#### **3) Heligan Estate Labour Books record not only jobs done daily and pay days, but also staff enlistments to serve in World War 1.**

Out of 23 staff employed outdoors in 1914, 13 Heligan men enlisted to serve in World War 1 – and only four survived. Note here, carpenter Fred Paynter's enlistment is recorded in the Heligan Estate Labour Book and staffing levels are much reduced. The Squire, with no heirs, gave his home over for use as a Convalescent Hospital, subsequently renting out the House, Gardens and Estate and moving to live in Italy. Though his tenants sustained Heligan's horticultural reputation for a while, the extensive productive gardens were the first to fall into neglect, with the outdoor

workforce slipping to just two by the 1960s. In 1974 Heligan House was converted into 22 flats and sold off, retaining only its immediately surrounding grounds.

#### 4) **Gateway north, from the Melon Yard. A scene of total neglect in 1991**

When Tim Smit first came to Heligan with John Willis (gt gt nephew of the last resident squire, Jack Tremayne,) they literally had to hack and climb to break through boundary laurel, and found the whole site swamped above head height by bramble and enormous fallen trees. Tim, a trained archaeologist, was inspired by the discovery of small artefacts which hinted at previous working lives here. Subsequently Tim returned with John Nelson, a local builder who was repairing our roof after the Great Storm of the South West, and the two cut their way into the Melon Yard, the very heart of the old working gardens. The overgrown Kitchen Garden lies to the north of this gateway.

**4b) Same gateway after clearance, restoration of structures and the return to full horticultural cultivation...** that's just a little peek because we love Before and After shots!

#### 5) **Signatures on the wall**

Back to 1990, on another early exploration Tim and John cleared a route through the undergrowth in the Melon Yard to a small cottage collapsed into the north east corner, which had been the former gardeners' night bothy with toilet, or Thunderbox Room. Here John excavated the rubble, gradually revealing columns of signatures by whom we presumed former staff, inscribed in pencil on the flaking limeplaster wall. Under one column of names they deciphered the date 'August 1914' – the outbreak of WW1... Then and there, John and Tim determined to restore these Lost Gardens in their name, not only structurally but to full function, reviving the range of traditional working practices of our forebears and celebrating not only their skill and knowledge but also the year round sheer hard labour of these men.

#### 6) **Outdoor Staff Team photo from c 1900**

This is the only team photo we have come across of the former Heligan outdoor staff. Fred Paynter, stonemason, stands second from the left, next to his father William - and later signed his name in the Thunderbox Room. He returned pretty unscathed from his war service and in due course, prompted by World War 1 national commemorations, we learned much from his son locally... Back to the team photo from the early C20th, the Head Gardener, Thomas William Preece, is seated centre here – 'without hat'. His descendants also kindly presented us with his horticultural bible, *The Gardeners' Assistant*, which he had inscribed as an apprentice in 1874, before he came to Cornwall.

#### 7) **Derelict glasshouses swamped by overgrowth in the Walled Garden.**

This is the setting where the previous precious photo was taken almost a century previously - in the top left corner of this aerial shot - where a secondary door opens into this glorious space. The story of the discovery and restoration of The Lost Gardens is well-known and some liken it to the romantic awakening of a Sleeping Beauty, for the old Pleasure Grounds did indeed conceal some incredibly beautiful century-old specimens. However, the economic backdrop to our apparently romantic adventure was dire. In 1990, the UK economy was in deep recession. I remember Prime Minister Margaret Thatcher shutting down many of the traditional trades, like shipbuilding, mining and printing - and our mortgage was on 17%! Unemployment had already run through generations in

some families - and in any case, much employment in Cornwall had only ever been seasonal. Tim's project partner, builder John Nelson, had dozens of local contacts who were only too keen to join our adventure, bringing free labour, skills, equipment and a well of endless energy and enthusiasm. It was not lost on us that most gardens open to the public at that time were managed by the National Trust, only opened seasonally – and none considered the historic productive areas to be anything more than useful for back of house parking! Hence, the seemingly enormous task of restoring this Walled Garden, with its three historic glasshouse structures, was driven by a number of motivations triggered by contemporary circumstances. Any great garden or indeed esteemed great family is dependent on its staff. Here at Heligan, respect would uniquely be given where respect was due. Guided by a full Restoration Plan, we commenced work in the Walled Garden in late 1993 - and delivered in little more than a year...

#### **8) The restoration of the productive gardens represents a celebration of traditional working practices**

We had by now tracked down the Cornwall County Horticultural Advisor, Philip McMillan Browse - former Head of Wisley Gardens, who had just semi-retired back to his home county, Cornwall. Not only did he advise us on protecting the most precious veteran shrubs in the Pleasure Grounds, but he also undertook to mastermind the reclamation and replanting of the Productive Gardens at The Lost Gardens of Heligan. These included the overgrown former 1.8 acre plot of the Kitchen Garden – invaded by boundary laurel; the small walled Melon Yard where all the traditional worksheds and frames for propagation had been unveiled of their bramble blankets and excavated, as well as the very early Melon House and unique Pineapple Pit; and the beautiful walled garden with derelict glasshouses, largely untouched for decades. Once the ground was cleared here and structures restored, an army of volunteers began to recultivate the inherited soil by hand. It has been our firm remit ever since, not to bring machinery of any description on to the ground, but to treasure the soil as one of three most valuable resources – the others being human input (labour and skill, knowledge, experience and endurance), and the critical then to-be-rediscovered heritage crop varieties.

#### **9) Heligan Flower Garden and Glasshouses restored to original function**

This was the scene in the Walled Garden in 1995, less than two years after it was reclaimed from overgrowth. Citrus, Vinery and Peach Houses were restored by properly employed local craftsmen, heritage fruits re-planted and the ground filled with rows of sweet scented traditional varieties of annual and perennial flowers, early salads and herbs, all buzzing with pollinating insects in summer. I think this is my favourite place in all the world... and thousands of others now say the same thing...

## NICOLA – The Present...

European Symposium – April 7<sup>th</sup> 2022

Nicola – Part 2 - Present

(2 x Aerial Photographs of Productive Gardens)

By the time I joined Heligan in 2006 our first Horticultural Director, Philip McMillan Browse had already created the vision and a working plan for the productive gardens. The aim being to recreate a fine working example of a Victorian Kitchen Garden in its heyday. My role was very much about protecting the already established ways of working, whilst also aiming to develop and improve them wherever possible.

As these images show, this wonderful productive garden is a complex creature, and it was clear from the very beginning that the devil is most definitely in the detail!

Having the right number of staff working in the garden is essential. Managing all these tasks, carried out by hand, in a very laborious way and to a high standard wouldn't be possible without our team of 9 gardeners. We've been incredibly lucky that this has continued to be recognised over the last 30 years right up to the present day. We are still given the budget to maintain these levels of staff and I think that has a lot to do with our continued success. A huge part of our gardeners' role is to engage with our visitors. On busy days they could be talking to literally hundreds of visitors and that can really add up timewise too.

Key to our success is maintaining a skilled workforce. We need to be constantly and most importantly, consistently sharing all our gained knowledge between the gardeners. We realise how precious and fragile this knowledge is, it can be so easily lost when longstanding experienced members of the team leave. We've had some big changes in the team over the last few years (re covid and other factors) So we need to work really hard once again to ensure everyone understands how all the small individual elements add up to create the whole picture. We're always aiming to champion the traditional skills, but it's also about empowering our team to create a fantastic garden they can be proud of!

(Photo of Philip & Drawing of cropping schedule)

At the start of the restoration Philip had the huge challenge of sourcing the many heritage varieties that would have been grown at Heligan. These varieties had fallen out of favour to more commercially produced crops and were in some cases incredibly hard to find. He tracked seeds down as far away as Australia and left no stone unturned in the search to restock Heligan with period correct varieties. Today our detailed cropping schedule is often a challenge, but a great source of satisfaction when all goes to plan! We grow nearly 500 varieties of fruits, vegetables, herbs and cut flowers, about 95% of those are heritage varieties, available pre-1910. We do save some seed, mostly varieties of peas, beans and potatoes that are no longer commercially available. We have very simple seed saving facilities so we always buy in fresh, viable seed wherever we can. Hunting down the old varieties still remains part of the challenge. It can be so tempting to be seduced by all the modern varieties but introducing them could so easily dilute what we do, we need to be very disciplined! This can prove frustrating for some gardeners; the strict regimes of the Victorian Kitchen Garden are not for everyone. Also, not for all gardeners are the meticulous methods of production, thousands of plants grown from seed and organised with near military precision. Direct sowing and planting out are done with great exactitude, so string lines and tape measures have become an essential part of our kit.

Looking at this drawing it does look like a very grand plan, but I think our visitors still connect with us because it's also a very accessible plan. It's easy to copy the idea and scale down the crop rotation and use simple hand tools as we do. Even in a very small garden you can create your own mini Heligan. So many of our visitors have done this and return time and time again for new inspiration.

(2 x photographs of Potting shed)

This image of the Potting shed to me symbolises our ethos at Heligan. Gardeners today working in these spaces as closely as possible to how they would have worked over a hundred years ago. Heligan was never meant to be a lifeless museum, it is a fully functioning working Kitchen Garden. We are however gardening in the 21<sup>st</sup> century so there must be an element of theatre involved to recreate the atmosphere of this lost time. The tools stored here are modern tools we use every day, they must be strong and fully functioning, not delicate antiques. The key is to remove as much as possible all materials that will interrupt this timeless feel. We use wooden handled tools, metal buckets, hessian sacking and wooden harvesting crates. No brightly coloured buckets or trugs and we aim to remove as much plastic as possible.

Certainly, no plastic water bottles, or mobile phones left on glasshouse shelves by forgetful gardeners. Again, small details but they can ruin the moment. Most of the workspaces are open or visible to our visitors, we don't hide away behind the scenes. People love to watch you working and ask questions, everyone enters the Potting Shed with a kind of awe, it feels special to be allowed into the space. For so many it reminds them of their grandads, the smells and sights are so evocative of times gone by. Creating these atmospheric spaces is something that's always felt important at Heligan. Photographs of the old gardeners, simple pots of fresh flowers, these small tributes provide poignant moments that genuinely move people. A strong connection to our gardeners past and present is something our visitors really appreciate.

(Photograph trained fruit in Melon Yard, Photograph of Pineapples, Photograph of manure piles)

Alongside the theatre of the garden there is still of course much serious horticulture taking place. The traditional skills and practices can be seen clearly in our Historic glasshouses where vines are grown on the rod and spur system and the early blossom of fan trained Peaches are hand pollinated with rabbits tails used like fine brushes. Here in the Melon Yard, we see carefully trained espalier wall fruits behind the orderly cold frames hardening off the spring crops. Melons and Cucumbers are trained in the Melon House showcasing the skills of gardeners in the 19<sup>th</sup> century and their ingenuity to recreate the growing conditions for what were then, highly prized and exotic crops. One of our most iconic crops which illustrate these traditional practices perfectly is of course our Pineapples.

Back in the early years of the restoration, once the purpose of the pineapple pit had been researched and established, the original garden team set out to grow a crop of pineapples using only hot, fresh manure. The manpower involved in this is just as labour intensive today as it was back in the 1800's. Ninety tonnes of fresh, steaming manure must be shovelled by hand over the winter months, into the trenches that run alongside the pineapple pit. The hot air created warms the fruits inside the growing chamber through honeycomb vents in the walls. With newly learnt skills and hard work the team achieved a successful crop! That is over 25 years ago now and over the last two decades it has been increasingly difficult to source such quantities of fresh manure locally. Not a problem the Victorians would have had, but we have had to search further and further afield to find a good supply.

In this modern world we need to start thinking about the resources used to produce this crop and the carbon footprint we create in the process. Now is the time to think about how we continue to grow Pineapples honouring tradition but perhaps creating the heat in a more sustainable way. It's quite a powerful example of how we need to protect the legacy of all these heritage skills, but also be mindful of our planet's future.

(Photograph of staff harvesting and Harvest Display)

Finally, I'd like to briefly talk about what we do with all our wonderful produce. Our main aim is to provide our tearooms with as much as possible and we have in previous years harvested as much as 5,000kg of produce for our Kitchen in a season! Over the years we have used the produce in our daily menus, Sunday lunches, Christmas dinners, feast nights and even vodka for the shop! Most recently our head chef has started monthly supper nights which elevate our produce onto a fine dining tasting menu, which is very rewarding for the team that grow it.

But it's not always as easy as it may seem to ensure all our crops make it to the Kitchen, even when it's on our doorstep. On a typical summers day, our busy catering team could be helping to feed over 2,000 visitors, and with the best will in the world they don't have the time to shell crates and crates of Broad Beans. So, cropping doesn't always go to plan despite clear communication about what will be available when.

When we have these gluts, we place them in wheelbarrows and offer them to our visitors to help themselves. We have thought about selling the produce but decided these acts of generosity are worth far more. It's a lovely surprise for visitors, adding to their experience and engaging them with our produce in the most direct way. Strawberries and Peaches harvested in the warm sun taste so delicious, it's a real pleasure for a gardener to hand them to a visitor and watch their faces as they taste an unexpected treat.

All the labours of the season are celebrated annually in October during our Harvest Festival events. Free tasting sessions, where visitors enjoy tasty treats prepared with our produce are very popular. We appreciate we are lucky not to have to rely on income from the Kitchen Garden and giving away so much produce may seem a bit rash. Of course, the produce does have a monetary value and an abundant supply of produce to the kitchen will help to reduce the catering budget. However, ticket sales and add on spends in retail and catering cover the cost of the gardens so having the luxury of this type of visitor

engagement has been very successful for us. Heligan has always been about people as well as produce, those who worked here in the past, those who work here now and all those who visit us to share that experience. I think we all realise this has played a huge role in our continued success over this last 30 years.



## FUTURE

Hello everyone, my name is Alasdair Moore and I am Head of Gardens and Estate at the Lost Gardens of Heligan. Thank you, Candy and Nicola, for guiding us through Heligan's past and present, it is now my pleasure to talk a little bit about what this means for the future.

Whenever Tim Smit writes or speaks of Heligan and the restoration, he uses the same phrase: "we did not restore Heligan to preserve the past in aspic". As delicious as a garden in aspic might sound, I think we can all appreciate the baseline of Tim's point. Simply recreating a snapshot of an estimation of a moment in our horticultural past, frozen in time, can be quite a hollow experience, both for gardeners and for visitors.

Something we are all interested in at Heligan is the interaction of the past, the present and the future – it is this which gives our garden both meaning and relevance. And it is meaning and relevance, as well as beauty, which will secure continued success. So the future...

I would like to pick up on just a couple of themes that Nicola touched on in reference to this, most particularly, heritage varieties of fruit and vegetables. As Nicola has already mentioned, heritage varieties are at the heart of what we do at Heligan. I would like to expand on this to demonstrate why we feel heritage varieties have both a relevance and meaning beyond simply their age. I would ask you to have in your minds, what I believe to be the most important question we face as a species currently – and Lord knows we have a few- How do we feed ourselves without destroying the planet?

The apple arch, that iconic walkway through our kitchen garden, was planted with heritage varieties of apple, both dessert and cooker. The arch runs on a gentle slope down to the melon yard, so the earliest flowering varieties are planted at the top and the later varieties lower down in the hope of avoiding late frosts. It is one of the most photographed and popular parts of the garden, unrelated to careful planting and heritage fruit crops.

Here at the top is one of the oldest varieties in the garden, Devonshire Quarrenden, first mentioned in the late 1670s. A few years ago we were sent a paper by Professor Leon Terry of Cranfield University with the snappy title "Biochemical Profile of Heritage and Modern

Apple Cultivars and Application of Machine Learning Methods To Predict Usage, Age, and Harvest Season.”<sup>1</sup>

At its most basic, this paper is a comparison of heritage and modern varieties of dessert, cooking and cider apples. Its starting point is and I quote:

“Although more than 7500 varieties of apples exist worldwide, many heritage varieties have been abandoned, despite a resurgence observed in recent years, in favour of mainstream varieties emerging from intensive selective breeding programs during the past few decades, leading to the decline of traditional apple orchards in many countries including the United Kingdom. The reason for this is the drive for sweet, crisp apples which are uniform in size and appearance and have acceptable disease resistance and prolonged shelf life.

In the United Kingdom, some older cultivars such as ‘Cox’s Orange Pippin’, ‘Egremont Russet’, and ‘Bramley’ are still commercially important, but most other heritage cultivars have experienced a rapid decline. As a result many ancient cultivars have been irreversibly lost.”

So far so good but we still have apples which are crisp and sweet and look pretty. Why should we worry about heritage varieties? Prof Terry and his colleagues introduced me to a new word “dihydrochalcones” – these are an example of the complex range of phenolic compounds found in apples. And what do they do?

(Slide)

I grew up with my mother chirping lovingly but insistently in my ear a fine old English saying... “An Apple A Day Keeps The Doctor Away” and the DHCs are very much the Dr - repelling elements of apples. The highly disturbing thing that Prof Terry and friends have found that not only are we losing the heritage varieties in which DHCS are to be found, these compounds have been bred out of the modern apple as part of our pursuit of sweet, crisp pretty apples. The apple will no longer keep the doctor away.

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<sup>1</sup> <https://dspace.lib.cranfield.ac.uk/server/api/core/bitstreams/c2a5f5e0-10d3-4d92-9bee-36c8dfb3139a/content>

Here is an absolute example of how heritage varieties are not just a thematic element of an historic garden but our future, our long-term health. What could be more relevant or more meaningful in a garden than holding the keys to nutrition and health? Eden itself.

Heritage varieties are an incredible genetic resource for our future and the preservation of them is of great importance. Not just in terms of pre-chemical fertilisers but in combatting pests and diseases, particularly in the shadow of a changing climate. We will need all resources available. As Nicola recounted, thirty years ago, many common varieties today were almost impossible to find. Today, the supervisor of the Productive Garden is a seed guardian for the Heritage Seed Library, responsible for helping to conserve and distribute these precious seeds but in the next few years, we are looking to further increase our efforts and our facilities to be able to do this at a greater scale.

In addition, it has been well-documented that the nutritional value of fruit and vegetables has been steadily declining through the 20th century. For example, British nutrient data from 1930 to 1980, published in the British Food Journal, found that in 20 vegetables the average calcium content had declined 19 percent; iron 22 percent; and potassium 14 percent<sup>2</sup>.

There is as yet insufficient research to definitively say why this is happening but the evidence suggests that it is related to modern cultivation techniques of ploughing, chemical fertilisers and pesticides destroying soil health. Modern varieties of fruit and vegetable, bred for yield, are failing to manufacture or uptake nutrient in the same way as heritage crops.

For Heligan, the heritage varieties we favour are those from pre-1910. It may seem an arbitrary date in some ways, marking the end of the Edwardian period but it also has a certain resonance. The summer of 1909 saw the first demonstration of the Haber Bosch process and in 1910 the process was first developed to an industrial level.

The Haber Bosch process delivers ammonia and was the breakthrough moment in terms of chemical fertiliser production. It was to transform the way the world farmed and the way

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<sup>2</sup> Historical changes in the mineral content of fruits and vegetables (1997) by Anne-Marie Berenice Mayer **British Food Journal 99(6):207-211 99(6):207-211**

Also: <https://www.tandfonline.com/doi/epdf/10.1080/09637486.2021.1981831?needAccess=true>  
<https://www.scientificamerican.com/article/soil-depletion-and-nutrition-loss/>

the world ate. It also provided the world with a new and ready source of explosives from WW1 onwards. The Haber Bosch process changed the world. And it continues to do so, burning 1% of the world's annual energy supply and today in 2022 we find ourselves held to ransom by dictators based on fossil fuel and food production. It is literally costing us the earth.

Pre-1910 heritage crops, by definition, pre-date Haber-Bosch and the dependence upon fossil fuel fertiliser. In a future where I believe our soil inputs / fertilisers / manures will need to be carbon-based, not chemical, we need to be utilising those varieties that were never reliant on a chemically based system. Traditional methods of cultivation in terms of organic matter. Feed the soil not the plant.

The Productive Gardens at Heligan are very much about the heritage varieties but as Nicola highlighted earlier, people and skills are critically important too. Knowledge is fragile, even with a team of nine, it does not take much for that network of experience and skill to be disrupted or even lost. Success is legacy and that is not just plants but people – species! The next goal is to create a practical residential studentship or apprenticeship which is built entirely around the practical skills over two years in the Productive Garden. Year one, learn the skills and year two deliver, them. What better legacy for the restoration and the past thirty years than the secure continuity of knowledge, skills and seeds.

Historic gardens should be about not forgetting our past but we must not forget the future either. We must not forget to keep asking ourselves why is this important / what does this all mean / why are we doing it. Historic fruit and vegetable gardens do not have all the answers to the question of how we feed ourselves without destroying the planet. But... But we can find many important clues in these repositories of nutrition, productivity and skills, some light to help us find a pathway through the darkness. And this is what real success looks like.

By their nature, historic fruit and vegetable gardens are tinged with nostalgia but in 21<sup>st</sup> century, they represent so much more. When I think about historic fruit and vegetable gardens and the future, I don't think of nostalgia, I think of hope, of inspiration and, most importantly, regeneration.