Marcher Apple Network

APPLES & PEARS

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Reviving the old varieties of apples and pears
in the Marcher counties

Man's official business: Chairman's report

AGM Notice

Notice is hereby given that the 25th ANNUAL GENERAL MEETING will be held at the Cider Museum, Ryelands Street, Hereford, on Saturday 16th November at 11:00. The purpose of the AGM includes receiving and, if thought fit, accepting the annual report and accounts, and electing four Trustees to the Board.

Coffee will be available from 10.30 a.m.

AGENDA

1. Apologies for Absence
2. Minutes of 24th AGM
3. Matters Arising
4. Annual Report
5. Presentation and Adoption of Accounts
6. Other Reports
7. Election of Directors
8. Appointment of Examiners for Accounts 2019/20
9. Open Forum
10. Any Other Business

Our VISITING SPEAKER, at around 12.15 p.m, will be Helen Woodman of Much Marcle who will tell us of her passions for cider, orchards and conservation.

PROXY VOTING

If you are not able to attend the AGM but would like to vote on any motions, you may do so by exercising a proxy vote. A form is available to anyone wishing to do so. It has to be returned duly signed, or notarised, to MAN's Registered Office (Brock House, Pelham Road, Upton Magna, Shropshire, SY4 4UA) 48 hours before the general meeting.

CURRENT DIRECTORS AND TRUSTEES:

Peter Austerfield, Mike Porter, Jim Chapman, Jackie Denman, Nick Dunn, Sir Andrew Large, Andy Pillow, Stephen Ainsleigh Rice and David Smith.

Four are retiring, Peter Austerfield, Nick Dunn, Andy Pillow, David Smith, all of whom are willing to, and seek, re-election. Any member interested to become a Trustee is cordially invited to contact the Company Secretary, Andy Pillow, at the registered office given above.

CURRENT MANAGEMENT COMMITTEE

(Officers): Peter Austerfield, Sheila Leitch, Wade Muggleton, Daniela Bergman, David Olivier, Andy Pillow, Stephen Ainsleigh Rice, David Smith. All of these have indicated they are willing to continue serving subject to member and Board approval.

Any member who would like to join the Committee is cordially invited to do so. The process is that any member nominated is subject to Board Approval. Nomination may be made at any time, for instance you can contact the Committee's Secretary Wade Muggleton at secretary@marcherapple.net. Alternatively you may contact any Trustee or Member of the Committee (Officer) or seek nomination at the AGM or after the AGM. Please give your special interests, e.g. help at shows and exhibitions, practical orchard work, secretarial, IT, PR and publicity. We meet three or four times a year and travel and out-of-pocket expenses can be paid.

VACANCIES ON THE COMMITTEE AND THE BOARD

We have been delighted to welcome David Olivier to the Committee. We would greatly benefit from further members joining the Committee. We're very welcoming and will give help to let you settle in nicely. It's not an onerous responsibility as we meet only three times a year at places most convenient to the Committee's "centre of gravity/residency".

Our Articles allow for twelve Trustees. We will have three vacancies by the time of the next AGM, so if you are interested in serving, please ask the Company Secretary, Andy Pillow, for more information.

VOLUNTEERING

We are keen to give members the opportunity to work in MAN orchards. It is seen as a benefit to members for experiencing the management of trees and orchards, becoming sensitive to the complexity presented by MAN's large range of varieties and priorities. This work is more suited to members who wish to embed and hone skills from prior experience of orchard management, including planting, pruning, grafting, careful and detailed observation.

MAN – POSSIBLE ENDOWMENT FUND

Since 1993 when it was founded, MAN has rediscovered, through the expertise and hard work of members and others, many local apple varieties once thought to be lost. These 'finds' have been propagated and planted in its orchards. Gradually this has established a valuable local heritage orchard collection.

Whilst MAN continues to look for other old varieties with local connections, its focus is becoming more directed towards ensuring the well-being of the collection — increasing knowledge about the varieties, and conserving them as a living genetic resource for future generations.

With this in mind, the Trustees are considering setting up an endowment fund, which will help ensure that there is always an income available to cover the costs of future maintenance of this core heritage collection that is independent of MAN's other membership activities.

The proposal that the Trustees will be asking members to ratify at the AGM will be to establish such a fund, which might include:

- designating a capital sum from MAN's reserves to launch the fund,
- allocating a proportion of each membership subscription to the fund,
- inviting further donations and legacies to the fund.

with the details being agreed by the meeting.

Jim Chapman

ORCHARD SHOWS

We intend to have a presence at shows at Tenbury Wells, Big Apple, Leominster, Craven Arms, Berrington Hall, Cider Museum, Chepstow and Acton Scott, as listed in the Events section (page 27) and at which we hope to see some of you and some most interesting apples.

ORCHARD NEWS

Plans have been prepared for Management of four of our orchards as mentioned below. Plans for developing both Paramor and Ty Glyn are being consider by the Committee. For Lower Ffordd-fawr and Tredomen the remaining issue is ensuring grafted copies of all trees of interest are taken during our withdrawal.

If you'd like to visit any of the orchards, please contact Ainsleigh via 01497-820332.

The times they are a changing – an Editorial

We, The Marcher Apple Network, are now 26 years old and from humble beginnings in 1993 we have a come a long way from those eight founder members wishing to track down and conserve the heritage apple varieties in the Marches area to today with the Network owning its own orchard, curating collections and delving into the world of DNA identification.

Times certainly change and the years pass by: we have in the last year held committee meetings at which, for the first time, none of those founder members were present, some having passed away and others standing down due to age and having "done their stint". We reflected with great appreciation the vision they had, their achievements...and our desire to carry on in the smae spirit. There is no way to put it subtly but MAN is facing challenges going forward: it is a fact that the demographic of our involved members and committee is top heavy toward the three-score-years-and-ten (and occasionally considerably beyond that!). In short we need some new blood, enthusiastic younger folk to get involved and take the organisation forward into the next decade and beyond.

If we fail to engage new committee members and other doers of the work, then we will not be able to carry on as we have done in previous years. So this is a plea to you..... we have over 250 members yet most of the doing in MAN is done by the same seven or eight folk. If you are passionate and enthusiastic then please just get involved. You don't necessarily need to sign up as a full blown committee member: we have two or three fringe members who contribute variously without being on full committee (but please feel free to do so — see Chairman's report opposite). We encourage those members most local to any event to add their support at local events.

So please help us to keep MAN going forward.... yes YOUR APPLE GROUP REALLY DOES NEED YOU ..... please contact the secretary at secretary@marcherapple.net if you would like to get involved.

Paramor

We reported in the News Sheet of this Spring that the Cwmdu Support Group kindly gave excellent support doing a tough but vital job. In the main orchard they have replaced twenty of the original tanalised stakes of trees planted about eight years ago, that had rotted, with pressure treated creosoted stakes. These new stakes should have a life of fifteen or more years so making the premium price very well worth it. Missing ties and labels were also replaced. Chris Ralph has again cut the hedge and incursions of black-thorn and brambles. Billie Jones continues to keep the grass neatly mown; the orchard looks very well. Other repairs to fences and boxes are underway as necessary.

Summer Pruning of all 132 standard trees was carried out by Tom Adams and Ainsleigh in early July. We also looked at all trees in the nursery area and did a little urgent work there. There has been quite a bit of damage to leaves from rosy apple aphids (mild winter?), Some trees have been defoliated by moths, a few instances of canker have been pruned out and a young tree removed. For the first time we've seen woolly aphid and apple mosaic virus (on a Blenheim Orange, which will be removed this winter) in the nursery area, and a standard tree had a piece of mistletoe growing... but no longer.

Stephanie Coates of the South and West Wales Wildlife Trust https://www.welshwildlife.org/ kindly gave advice about which areas of Paramor have highest conservation value and how they should be managed: in and near the alder tree coppice minimum disturbance for allowing raptors feeding opportunities in the long grass, while downslope of the nursery field in wet ground annually cut and rake back grass for reducing soil enrichment. Elsewhere there is a preference to move from grass mowing to grazing once the trees are large enough to be effectively protected. Thus a phased approach over the next 10–20 years will be adopted. Until then mowing will be continued in the nursery areas around semi-dwarf trees and main orchards around younger standard trees unless small equipment for hay-making is available locally.

As part of withdrawing from Lower Ffordd-fawr and Tredomen we have grafted about 13 standard trees and 31 semi-dwarf trees for planting at Paramor this winter. A further three standards and ten semi-dwarf trees are planned for grafting next winter ready for planting the following winter.

Several trees are being considered for removal, 16 standards and about 30 next winter in the nursery areas. These are duplicates or ones found to be common out-of-area varieties. IDs resulting from the DNA fingerprinting has helped considerably in selecting these and having the confidence to take this action. Delay removing a tree seen no longer needed just results in a bigger tree and task. Over time, some more of the unknown trees on the nursery areas may be identified, enabling some to be removed and likely a few replaced with standard trees, as we discovered when assessing what to do at Tredomen, keeping adequate spare locations available is prudent for changing out trees easily.

With these changes Paramor will become substantially filled to capacity in the nursery area and with about 10–20 spaces for standards remaining in the main orchard. After last year's bumper harvest, many of the trees have few apples on them. Some trees have been attacked by aphids. Caterpillars had largely defoliated Lord Hindlip and Tewkesbury Baron but they are recovering foliage now. Yes, Paramor is looking glorious with grass recently cut.

Tredomen

As reported in the Spring News Sheet, over this winter most trees at Tredomen have been pruned of their lower branches as we hope to start light grazing by sheep underneath either this year or next, at least that's grazing in spring and early summer. We have grafted-on all the "valuable" trees at Tredomen. Of the trees grafted for Paramor mention above, over 80% are from Tredomen. We expect a few failures, and there may ID surprises from DNA FP, and we are expecting to need a further one or two rounds of grafting to be sure we've conserved all of value.

Westhope

Cropping is modest to good this year on these 15 standard trees in the orchard. Planted in the early 90s some trees are now of a considerable size which makes pruning and picking somewhat difficult. Duke of Devonshire (late dessert) is showing a very good crop and Lady's Finger of Hereford is still holding on in spite of a split trunk which required surgery a few years ago.

Plans for summer pruning did not materialize so a winter thinning will be done instead. The grass is usually cut in late July to allow wild flowers to seed and there was one solitary orchid which a local thought might be a 'Heath Orchid', a new one on me, but there was some doubt. The copse next door had a fine show of early purple spotted orchids earlier in the year so maybe it is an escapee although the flower was pink rather than purple.

Ty Glyn

Also reported in the Spring News Sheet, was that your Trustees decided to agree to a 25-year lease on part of a field opposite Ainsleigh's home, Ty Glyn, where we now have a collection of 332 apple trees. A further 144 trees are being grown on from scions taken last winter in readiness for planting next winter. Beyond that there are already another 40 or so more that we are considering for grafting next winter.With these additions there will be about 516 trees; maximum available spaces is 545. Members are welcome to visit to view, and of course work in it if they wish. This will soon contain a second copy of all the interesting or unknown varieties that we have accumulated at Paramor and Tredomen as well as leaving room from some more accessions as opportunity arises.

All trees were inspected, pruned by Tom Adams and Ainsleigh in early July. All but the leading shoot was pruned back to three leaf buds. Aphids had been a severe issue on nearly one-third of the trees (which were sprayed with Ultimate Bug Killer for enabling these trees to get better established) and no issue on another third. Cankered material on eleven trees was removed, one tree removed completely because of canker on rootstock and two others are under observation. On two trees there might be some signs of apple mosaic virus. are.

Rabbit numbers have been increasing this summer, and several have been seen outside the orchard fence. None inside, though. Checks are made regularly around the perimeter fence and with a camera. Foxes have left. Our most common visitors are blackbirds, with one seen in flight here.

Ainsleigh Rice

Mulching Madness

The aim of this article by Dr Glynn Percival of the Bartlett Tree Research Laboratory is to outline developments in mulch technology that can be used to enhance fruit tree yield and root growth

It is now well recognized that for newly planted fruit trees, the first year is critical for good root establishment. A tree is 'established' once it has grown sufficient roots to stay alive without the need for supplemental irrigation. Consequently enhanced root growth equates to quicker establishment. Mulching under fruit trees provides the simplest means to stimulate root growth as mulches suppress weed growth, maintain a constant soil temperature and moisture retention, encourage mycorrhizal associations and improve soil fertility. Such benefits will become more important as during the summer of 2018 the UK experienced a prolonged drought period identified as one of the hottest summers on record, with climatic models indicating the UK will become a warmer drier country over the next twenty years.

Young Pear tree with fresh chip mulch.

Wood chip provides an ideal mulch for fruit trees. It is long lasting, breaks down into a humus, and is available in large quantities as a waste by-product of the arboricultural/ forestry industry so is inexpensive to purchase. When making mulches from wood chip the general consensus is to allow the wood chip to "rot down" for several months. Contrary to this however, research at the Bartlett Tree Research Laboratory based at the University of Reading has shown that far greater benefits can be obtained when a fresh rather than composted mulch is used. The premise behind this, is that trees contain a diverse array of chemicals such as terpenes phenols, alkaloids, sterols, waxes, fats, tannins, sugars, gums, suberins, resin acids and carotenoids. These classes of compounds are known as secondary or special metabolites; many of which are commonly used for medicinal, botanical and pharmaceutical purposes. Consequently, when a fresh mulch is used all these chemicals are released into the soil which in turn can have a profound effect on soil biology which is manifest above ground in terms of fruit yield and root vigour.

For example, a field trial was set up at the Bartlett laboratory using 1–1.5 m high trees of Conference pear and apple cv Gala. Trees were planted in late January and mulched to a depth of 12–15 cm using one of six mulches made solely from either beech (*Fagus sylvatica*), hawthorn (Crataegus monogyna), silver birch (*Betula pendula*), cherry (Prunus avium), evergreen oak (*Quercus ilex*) and English oak (*Q. robur*). Ten trees per mulch were used and all mulches were applied at the same time as the pear and apple trees were planted. During the growing season no irrigation was required and no supplementary fertilisers were applied. Effects of pure mulches on crown volume growth and fruit yield were recorded at the end of the growing season. Interestingly, mulches derived from hawthorn and cherry were shown to be the best type of mulch, increasing crown volume growth by 100–150% and fruit yields by 400–600%. Even the 'worse' type of

pure mulch (beech) increased crown volume growth by 20% and fruit yields by 50%. The importance of this result is that any mulch is better than no mulch.

Why the differences between mulches?

The most likely reason is, as stated before, as the mulch breaks down, chemicals within each mulch influence soil biology which in turn influences root growth and fruit yield. In support of this, previous research has shown a mulch derived solely from cypress trees slowed down the growth of hydrangeas, spirea and viburnums compared to several garden centre bought mulches. As cypress trees are noted for their resistance to decay fungi which is associated with the presence of phenolic compounds in the wood, it was suggested these phenolics would be leached into the soil in turn inhibiting root growth. Other chemicals found within trees, however, have been shown to be effective at stimulating root growth. Both hawthorn and cherry are inherently high in sugars such as sucrose and sorbital. Applications of sugars to transplanted English oak, silver birch and European beech trees has been shown to be effective at stimulating root vigour, encouraging mycorrhizal associations, alleviating transplant stress and increasing survival rates while latest studies have shown a fresh mulch derived solely from Eucalyptus cladocalyx had a positive effect in transplant performance of Platanus racemosa.

For the future

Results of our research and that of others, show that a mulch derived from a single tree species has the potential to provide many benefits, i.e. in our experiment fruit yield of young apple and pear trees was increased by 400–600%. Such benefits may have a positive impact not only for those involved in the care and maintenance of fruit trees but other industries such as arboriculture, forestry, and horticultural crop production. Importantly, use of mulches require no capital investment and only small adjustments to standard management aftercare procedures.

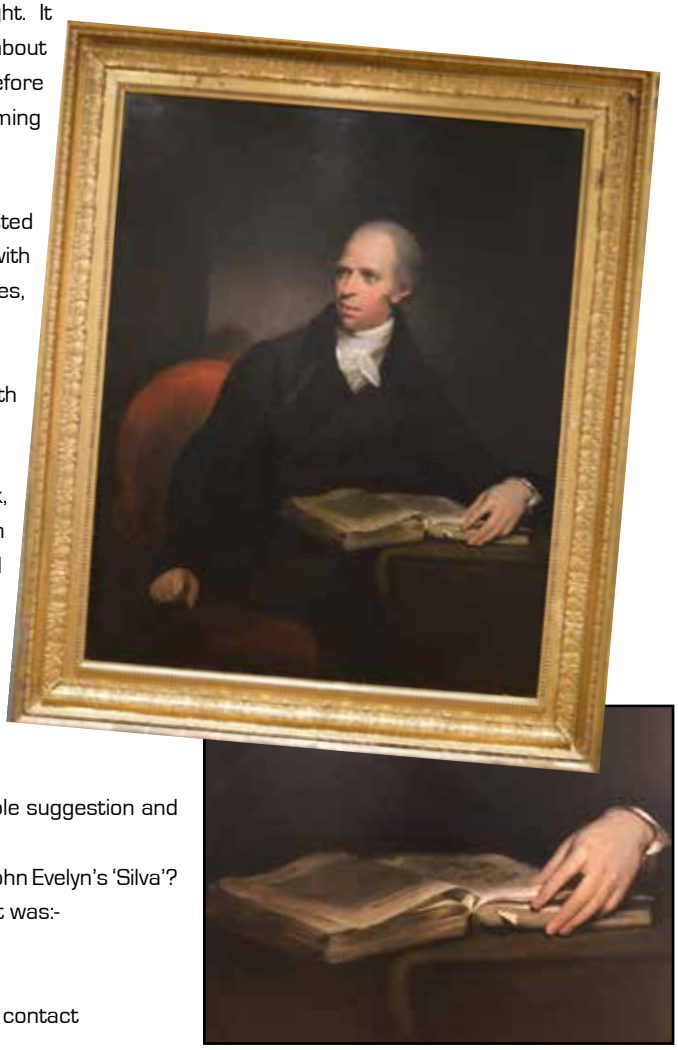
Applying mulches for fruit trees

Ideally each tree should have a mulch ring measuring at least 1m in diameter; this can be expanded by 30 cm each year in the first few years after planting to pave the way for new feeder root growth. Mulch should be a minimum depth of 5 cm, and a maximum of 10 cm.

[Thanks to The Northern Fruit Group for bringing this to our attention and for arranging permission to reproduce it here. – Ed.]

Thomas Andrew Knight and a book

In the Cider Museum at Hereford there is a painting of Thomas Andrew Knight. It has been cleaned recently and looks splendid. It looks as if he'd have been about 50 years of age, hence a guess for the date painted is about 1810, just before the *Pomona Herefordiensis* was published. TAK does have a certain charming self-importance (any other phraseology welcome!).



Dave Marshall, who is the Chair of Trustees at the Cider Museum was interested to see the book being held in TAK's left hand (was he left handed?). He raised with Marcher Apple Network whether we could identify it. Well, apples and pears yes, but books is a new departure.....

So let's have a look at that in some more detail and see if we can come up with something.

The book is about 250 mm wide and approximately 300 tall. It's pretty thick, perhaps 40–50 mm and has many hundreds of pages. There is an illustration of the left hand side and text or a block typeset on the right. The cover and spine don't have anything of note to add. It's well-thumbed too.
This lot rather rules out the *Pomona Herefordiensis*.
DNA wouldn't help either. So I was stumped.

Just as folk ask MAN for fruit ID, so we should ask an expert.

Darren Bloodworth of C. Arden (Bookseller) ABA, has come up with a plausible suggestion and showed me a copy of it too. Here's what he wrote:
Given his history, I wonder if it might have been a copy of the Hunter edition of John Evelyn's 'Silva'? This might be a complete fancy for me, but the reasons I suggest it are that it was:-

- a highly respected work
- TAK served as president of the RHS, so I'm assuming he came into contact with 'Silva'
- It was published in 1776 and was the first edition of Silva to be illustrated
- Using TAK's hand as a guide to size, it ties in with 'Silva' which is quarto in size and runs to 700 pages give or take

Stephen Ainsleigh Rice

"Permission to publish these photos by Dave Marshall of the Cider Museum is gratefully acknowledged"

A fruitful venture

Introduction

From 2012–13 onwards, I planted a mini-orchard, aiming to grow some garden-worthy varieties and produce fresh fruit without too much effort [i]. The site is 99 m above sea level. My approach is perhaps as 'intensive' as that of commercial growers, although my ground cover is 100%. Around 30 apple and pear trees on dwarfing rootstocks occupy 0.018 hectares [ii]. Very unlike traditional standard orchards, but organic [iii].

Clover was planted below the apples in 2015 to fix nitrogen and improve fertility. It will now be extended below the pears and plums.

Varieties

Those scheduled for phase 1, in rough order of ripening, were:

Apples:

Laxton's Epicure, James Grieve, St. Edmund's Pippin, Norfolk Royal Russet, Sunset, Queen Cox, Golden Russet, Brownlees Russet, Jupiter, Holstein, Jonagored, Rubinette, Captain Kidd, Lord Hindlip, Golden Delicious, Crispin, Golden Russet, Sturmer Pippin.

Pears:

Doyenne d'Été, Jargonelle, William's Bon Chretien, Fondante d'Automne, Baronne de Mello, Beurré Bosc, Beurré Superfin, Doyenne du Comice, Glou Morceau, Josephine de Malines, Nouveau Poiteau.

Some are being culled due to 'under-performance'. A few more will be planted. Some 15% of trees were mislabelled. See 7 & 8.

Rootstocks, Training

On this deep silty loam, pH 5.5-5.8, M9 rootstock gives heavy crops of large apples and the trees can be picked, pruned and thinned from the ground [iv]. Most pears are on quince C. On this site, I could hardly improve on either of them.

Four pears that are incompatible with quince were supplied on 'Pyrodwarf' (PD) which in my experience recreates the old problem of monster pear trees. Why are suppliers using it? I am ring-barking these trees to keep them in check [v].

The dwarf pear trees are summer-pruned only. The apple trees too, unless I see problems in winter, like crossing branches.

Many pears grow naturally into pyramid-shaped trees with a central stem. I'm retraining the apples to a similar shape. I should have done so initially [vi].

None of the trees have been watered except in their first spring or summer. The soil is well-drained and water-retentive.

Pests and Diseases

Captain Kidd, Crispin, Jupiter, Golden Delicious and Rubinette experience scab and would need regular spraying, maybe with a garlic-based product. The others suffer little damage. James Grieve and Sunset get capsid bug damage in some years but it does not affect eating quality. Codling moth and sawfly damage are minimal, possibly because of a high local bird population.

The pears are mostly pest- and disease-free. But Beurre Superfin gets some scab.

Yield, Quality

Scaled up, the apple trees yield up to 40 tonnes/ha.y. Pretty high [vii] [viii]. But small trees provide less of a wildlife haven than standards, although unmown ground cover certainly provides frogs with shade and shelter.

In 2018, the 'old' varieties Laxton's Epicure (1890), Sunset (1918), Queen Cox and Golden Russet (18th.C) were up to their usual quality. So was the 'modern' Crispin. The 'modern' Jupiter, Holstein and Captain Kidd dropped some fruit and the other apples ripened prematurely and developed water core and bitter pit. James Grieve (1893) kept a bit less well than normal [ix]. Nearly all pears did well in 2018; most have set a full crop in 2019.

Verdict

Apples

Excellent:

Laxton's Epicure, James Grieve, Sunset, Queen Cox, Crispin, Golden Russet, Sturmer Pippin.

Good: St. Edmund's Pippin, Norfolk Royal Russet, Jupiter, Holstein, Jonagold, Captain Kidd.

Disappointing: Rubinette, Lord Hindlip, Golden Delicious [x].

Pears

Excellent: Doyenne d'Été, William's Bon Chretien, Fondante d'Automne, Doyenne du Comice, Glou Morceau, Josephine de Malines.
Good: Beurré Superfin, Beurré Bosc.
Disappointing: Jargonelle, Nouveau Poiteau.

High ratings broadly reflect a) heavy and b) regular cropping c) flavour d) disease and e) pest resistance in this garden since 2014.

Mislabelling

Four sources describe Nouveau Poiteau pear as 'large, delicious, melting and perfumed'. [xi] Others say 'small to medium, 'sweet' or 'pleasant' tasting. My pear fits the second description. Do I have the real Nouveau Poiteau? One for the NFC, I think.

Altogether, nearly 15% of apples and pears were mislabelled. Would any commercial grower accept over 1,500 out of 12,000 trees being the wrong variety?!

Future

Pears

I am planting the late Santa Claus and Winter Nelis. But where can I get the very late Passe Crasanne, Bergamotte d'Esperen, Beurre d'Esperen or Easter Beurre? They have been vanishing from commerce at the time that most pears now crop heavily and regularly.

With the climate warming, [xii] might some commercial pear growing move from Kent to Herefordshire? We have vast areas of high-grade soil compared to most counties. [xiii]

Apples

I am adding more 'old' apples which keep very late, e.g. Reinette de Canada, Boston Russet, Winston, Suntan, d'Arcy Spice and Granny Smith. As before, if they do not 'perform', they will be culled - or rebudded if I can do it with a significant success rate.

'Commercial' websites now list as late varieties Braeburn, Cameo, Kanzi, Rubens, Jazz and Zari. [xiv] Some supermarket Braeburn that I bought in spring 2019, grown in Herefordshire, were delicious. I'll assess them all. [xv]

David Olivier

Notes

[i] The orchard is part of a larger project concerned with energy efficiency and carbon sequestration. See www.energyshowcase.org.uk or temporarily www.theenergyshowcase.wordpress.com.

[ii] If they expand to 0.03 ha this still equates to only 15 x 20 metres. MAN's Tŷ Glyn orchard, Hay-on-Wye is eight times larger.

[iii] Gardeners cannot certify their operation as organic given the cost.

[iv] In my experience, M9 is too vigorous for Crispin, not vigorous enough for Golden Russet. Most varieties do well on it.

[v] See mid-20th.C fruit-growing books for this method.

[vi] Dr. T. Robinson at https://www.youtube.com/watch?v=gJF4wLgXnK8 suggests planting 2,500-3,000 dwarf trees per ha with central leaders. UK gardeners are still being advised to use open-centre trees. But they a) need more pruning b) yield less fruit.

[vii] The heavy croppers, i.e. Captain Kidd, Crispin, Queen Cox, James Grieve, Jupiter and Sunset seem to yield nearly as much as commercial non-organic orchards in the Netherlands or New Zealand. See http://www.martech.co.nz/images/04orchard.pdf. 20 kg per tree on a 2.5 x 2.4 m, 3 x 2 m or 4 x 1.5 m grid (1,667 trees/ha) is 34 tonnes per hectare; 25 kg is 41 t/ha.

[viii] It is nearly five times the output of a traditional orchard of the same area https://businesswales.gov.wales/farmingconnect/sites/farming/files/112012-orchard-management.pdf.

[ix] I have seen better-quality James Grieve from trees on non-dwarfing rootstocks and poor dry soil in eastern England. The fruit is then medium, not large to huge. But they all taste delicious.

[x] Breinton Fruit Farm, Hereford, 50 metres above sea level, successfully grows Rubinette and Golden Delicious. A mystery.

[xi] Descriptions from Hogg, John Scott's Nursery before it closed, Chris Bowers, Bernwode Nursery.

[xii] At 0.4 degrees K per decade. Martin Crawford, Agroforestry Research Trust, personal communication, 2017.

[xiii] http://www.landis.org.uk/soilscapes/#

[xiv] http://www.englishapplesandpears.co.uk/.

[xv] Assess, not necessarily plant and I could not buy Jazz even if I wanted to: https://www.gardenfocused.co.uk/fruitarticles/apples/variety-jazz.php.

2019 in a Snapshot

Every year seems to have its ups and downs but 2019 has been an interesting year with very mixed and varied reports from across the region. We had what can only be described as a very mild and dry winter, frosts were few and far between and rainfall scarce to non-existent for extended periods. Spring appeared to come early with glorious weather at Easter which coincided with the pears being in blossom and as a result, certainly in some places, pear set was excellent. This fine weather did not last and when the apples were in blossom just two or three weeks later it had turned much colder and unsettled, with more than the occasional sporadic downpours. As a result, reports of apple set were mixed, with some reporting next to nothing while for others a reasonable to good set. In some orchards there is the odd picture of some varieties laden alongside trees that are totally blind. The mild winter was perhaps responsible in large part for the reports of high numbers of pests, various moth caterpillars and aphids seemed to be in plague proportions in spring and early summer, presumably due to lack of hard frosts and severe weather that might have reduced their numbers. Damage to young growth as a result was severe in some orchards and gardens. Such are the vagaries of blossom, pollination and the good old British weather. By the time you come to read this the resulting crop – or lack thereof – will be evident from what is outside the window in your own locality.

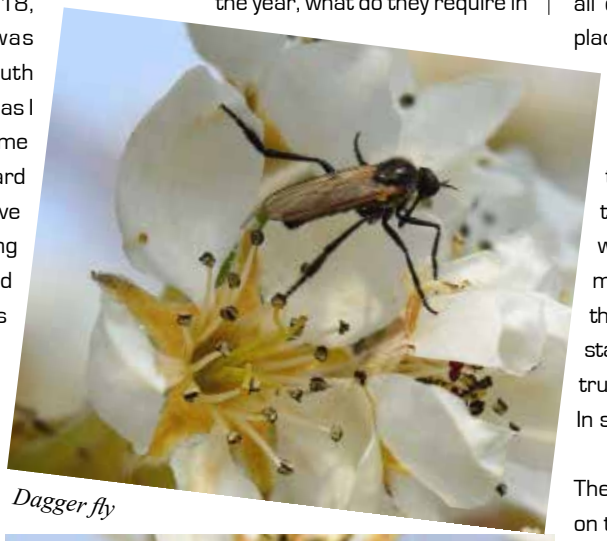
Pollinators

The plight of our pollinators is seemingly the subject of the moment, but do we know what exactly is pollinating our orchards and garden fruit trees? Much is made of the plight of the honey bee, and whilst their decline is a serious subject are they perhaps the poster boys and girls of an entomological news story, when in truth all manner of unsung heroes of the insect world are out there doing the pollination for us and suffering equally drastic but largely unnoticed declines?

This year saw an amazing display of blossom despite many of us having rather limited expectations after the wonder crop of 2018, so blossom in April and early May was something to behold. In my part of South Shropshire the pear blossom was as good as I have ever seen it. If next year you have the time to spare, standing alongside a semi-standard or dwarf tree, i.e. one where you can observe it from the ground, makes for very interesting observation in terms of what comes and goes from the blossom by way of insects seemingly doing pollination.

When I tried this exercise over the Easter weekend observing my pear trees in full and magnificent blossom, I saw bumble bees, solitary bees, mason bees, hover flies, dagger flies, dung flies, pollen beetles and yes a few honey bees. Many of them I was unable to identify down to species level but the amount of activity was remarkable, and this is where the subject becomes complex and potentially depressing for whilst the honey bee has had petitions to Parliament and national campaigns for their preservation, the rest of these insects are scarcely on the radar of conservation concern. This is an observational fact that has been stated elsewhere but one with a blatantly provable test. I was born in the late sixties so was a child of the seventies and rode a motorbike for much of the eighties and in those days to ride country lanes in the height of summer was entomological carnage. If you didn't have a full face visor pulled down you risked an eye full and a stomach full of insect biodiversity. To go for a country drive was windscreen Armageddon for a multitude of the insect kingdom. Yet today a similar drive or ride you hardly ever need to clear the windscreen or visor, the sheer volume of insect loss that the countryside has sustained is extraordinary and is almost totally unmeasured. Catastrophic insect decline has occurred under our noses and we haven't really noticed. We have all seen shock headlines about how some vast percentage of the world food production is pollinated by insects ... so concerned we should be!

The honey bee is I believe possibly the most studied insect in the world whilst all the other flies, beetles and assorted pollinators are largely understudied or indeed unstudied. We quite simply know little to nothing about them, where do they live during the rest of the year, what do they require in order to complete their life cycles? We simply don't know. What effects climate change, agricultural chemicals, air pollution, changes in crops, rising temperatures, extremes of weather, etc. might be having on them we have no idea.



Dagger fly

Hoover fly

Pollen beetle

So what can we all do to help pollinators and in doing so help our orchards and garden fruit trees. A complex question with almost certainly even more complex answers, but a simple action we can all do is ..... well..... be a bit less tidy, let some long grass grow in your orchard, sow or plant a wildflower strip, insects, like all other wildlife, need a home, a habitat, a place to live, breed and just "be" We live in a countryside all too devoid of such places, so we can all do our bit to help wildlife by creating habitat however small. Many of the micro flies require deadwood hence their abundance in derelict old orchards with decaying timber, in a young orchard like mine deadwood is an absent habitat, yet one that can be artificially created by knocking in a stake and then wiring a selection of branches, trunks and sticks to create a false dead tree. In short we can do a little bit for pollinators.

The Three Counties orchard produced a film on this subject that can be viewed at https://youtu.be/NVa_bdwQu20

"It would be outside the scope of this paper to describe the varieties of apple. I will only say there are far too many: probably a dozen kinds of the latest ripening varieties would be enough in any locality for cider-making. To make confusion worse confounded, the names of the apples vary in almost every parish, and I also meet with many excellent apples with no name at all, or none that I can find out."

— a quote by Neville Granville, (inspiration behind the foundation of Long Ashton Research Station) in a piece he wrote in the Journal of the Royal Agricultural Society,

The Wonderful World of Seedlings

In MAN we are concerned about named varieties, their historic descriptions, their accreditation and of course the propagation of our Heritage apples. Yet it is worth remembering that all varieties originated as seedlings, be they random finds or bred crosses. The genus Malus is believed to be one of the most genetically diverse genera in the plant kingdom, something borne out by the sheer variation we see in the fruit. From huge cookers, like Annie Elizabeth and Howgate Wonder to tiny crab apples, bitter cider fruit and delicious sweet dessert apples of every texture and flavour.

The chance of coming across the next Gala, Pink Lady or Braeburn as a chance seedling is about as likely as winning the lottery every week for a year. But for those of us with the room to experiment, growing a few seedlings can be an interesting experience. About five or six years ago I planted a range of pips in root trainers and waited to see what came up. I then grew on those that did come up in pots before planting out in a field. Six years on, almost all have cropped with fifteen of them producing in the summer of 2018. The range of forms, sizes and characteristics is considerable as can be seen from the photograph above.

The variation in fruit from 15 different seedling trees.

None of them is especially noteworthy in terms of amazing flavour but there are a few interesting characteristics: one hung on the tree until almost Christmas, others dropped suddenly before September was out. So a large crop of seedling fruit may not have an obvious use but mine were perfectly usable as mixed fruit juicing.

Observing seedling trees is not all about fruit, the vigour and form of the trees themselves is as diverse and variable as the fruit. Some can be incredibly vigorous, some have very upright form. Some are spiny with almost thorn like protrusions.

So whilst there may be up to 3000 named British varieties and perhaps 10,000 or even more worldwide, there are millions of seedling trees of which each and every one is genetically unique. All the apple trees we see growing on the motorway embankments and the side of dual carriageways are just random pippins, almost all average to mediocre but somewhere out there there may be a few 'stand out' apples. If we believe in the value of genetic diversity and variability in keeping alive disease resistance, vigour and health then seedlings are wonderful things. From my highly limited observation and experimentation some are incredibly scabby and have poor skin condition, others are blemish free. If growers kept accurate records of which pip produced which tree we would know 50% of the genetic make-up of the new tree and indeed sometimes it is possible to take a punt on what at least part of the parentage of an apple may have been. Some characteristics do seem to reappear — and reappear such that we do know what one of the parents was — one common example of this is the long stalk of Golden Delicious. It regularly crops up in some seedlings and of the millions and millions of Golden Delicious apples the world has consumed in the last fifty or so years we may speculate that there could well be a good number of seedling trees of Golden Delicious parentage.

It is possible that some seedlings are truer to those characteristics of their parents than others, but growing a few pips is a great way to introduce children to the art of propagation and for those with the space to experiment like this, growing a few seedlings through to fruiting age is an interesting experiment.

Wade Muggleton

A four year old seedling tree showing great vigour.

Pyrus the Pear

It may or may not have escaped your attention that the title of this journal is Apple and Pears. Yet down the years Pyrus the pear has not so much played second fiddle as been largely absent from our pages. This is great shame for Pears and their history are equally as rich and interesting as their cousin Malus the apple. Apples are much loved and widely written about, with countless books, pomonas, journals and articles on the cultivated apple (*Malus domestica*) yet the Pear in all its forms is a far less well known member of the Rosaceae family. Works on pears are by comparison thin on the ground and a huge gulf exists in the knowledge of things pear-related.

Pears belong to the genus Pyrus, a wide ranging and diverse genus found across the world, thought to have originated in the foothills of the Tian Shan, a mountain range of Central Asia, where the forebears of *Malus domestica* also originated. They probably spread west via the trade routes and migrations of early civilisations as the apple did, evolving into a diverse group of over twenty widely recognised species. The enormous number of varieties of the cultivated European pear (*Pyrus communis* subsp. *communis*) are without doubt derived from one or two wild subspecies (*P. communis* subsp. *pyraster* and *P. communis* subsp. *caucasica*), widely distributed throughout Europe and sometimes forming part of the natural vegetation of native forests — what we might term 'wild' or 'hedge' pears found randomly in the countryside.

Hedge pear

Pear cultivation in temperate climates extends way back in human history with evidence of its use as a food appearing in the archaeological record in a diverse range of periods. The word 'pear', or its equivalent, occurs in all the Celtic languages, and we know they were cultivated by the Romans, who ate the fruits raw or cooked. Pliny's Natural History recommended stewing them with honey and noted three dozen varieties. So perhaps today the eating of pears has fallen to an almost historic low. A great shame when there are about 3000 known varieties of pear grown worldwide, although the average supermarket may stock only two or three types. Thus, like apples, there are countless varieties, so few of which ever make it into the shops.

Pears are normally propagated by grafting a selected variety onto a rootstock, which may be a pear (*pyrus*) or quince (*cydonia*). Quince rootstocks produce smaller trees, desirable in commercial orchards or gardens although for longevity and stability Pyrus rootstocks are superior (in the author's view).

Pear wood is close-grained and in the past was used as a specialised timber for fine furniture and making the blocks for woodcuts. The production of pear timber may have given rise to the mis-construed saying "Plant pears for your heirs" which some have taken to infer that you will wait a long time to see any fruit when planting a young tree, when in fact the saying may well have related to the timber since by planting pear trees you are leaving your heirs something of value way into the future. Indeed many varieties will fruit well within four or five years so seemingly proving that the saying does not relate to their fruiting characteristic.

Whilst almost all pears in the supermarkets are dessert fruit for eating fresh, cultivated pears fall into several groups. There are inedible perry pears, very high in tannins and only good for juicing and fermenting into Perry, a historic drink which has undergone something of a resurgence of late.

There are harvest pears which, like early eating apples, can be picked and consumed straight from the tree as they do not posses any keeping characteristics. Presumably so named as their ripening often coincided with the harvest when they were eaten out in the fields by farm workers.

There are also the much overlooked culinary or cooking pears which we refer to as Warden Pears for they are a group of usually large pears that never truly ripen to a point where they can be eaten fresh so are only usable for baking and stewing. They also tend to possess good keeping qualities and can be stored through the winter. The most famous example locally being the Worcester Black Pear and the subject of my recent book (see below).

Newland pears

Worcester silk

Talgarth pears

The "Worcester Black Pear" by Wade Muggleton is published by The Three Counties Orchard Project and is available from the MAN website shop

This article has been revised from the article which first appeared in 'The Worcestershire Record, No 45'.

Then there are the dessert pears, by far the largest group in terms of sheer number of varieties, which are picked green and then stored until ripe. If they are kept at low temperatures the ripening process is delayed, and they can then be bought into room temperature when the ripening accelerates over the next few days. There is an old joke that there are only ten minutes in the life of a pear when it is truly ripe and the skill lies in judging just when those ten minutes are.

As we know fruit identification is now moving into the world of DNA where leaf samples can be analysed for the genetic break-down of a sample tree that is then cross referenced against the National Fruit Collection's DNA database. This is of only limited use in the identification of pears, for whilst the National Collection at Brogdale have just over 500 varieties there are lists of well over 1500 named varieties in some old catalogues, so many submitted samples will simply come back as "DNA no known match," and considering the limited number of historic references then there is little description to enable a specimen fruit today to be linked with any historic name.

In the last couple of years I have come across several interesting pears on very old trees but the chances of ever being able to work out what historically they were known as is extremely remote. It is still worthwhile DNA-ing them so the profile is recorded and stored should any future sample ever match it and thus reveal some further clues. Sadly, much of the pear story is likely to be forever lost as there is simply not enough information and evidence to go on. Yes, there are a number of interesting old pears still hanging on in forgotten orchards and over-grown corners of the countryside but in terms of formal identification, but ever being able to name them as historic varieties I fear might be a step too far. They should still be propagated and cultivated as pieces of our history and as an important genetic pool, but we may have to give them new working names to reflect the short-fall in the historic knowledge.

Here are some photographs of a range of unidentified pears that have been bought to my attention, but we must remember that we have been unable to identify them only because there are so few people who "know" pears and so little reference material exists. Working with The Worcestershire Wildlife Trust we are establishing a collection of the surviving Warden-type pears on land near Pershore, slowly collecting known varieties and planting two of each in a collection orchard.

Wade Muggleton

Jennett pear

Kinlet pear

Unknown Nashi

Wade Muggleton of MAN and Harry Green of Worcs Wildlife Trust planting the Warden collection Dec 2018.

Possible Finds

Waltham Abbey Seedling ?

As reported in last years A&P we had contact from Mr Jones of Kent regarding a possible find of Waltham Abbey Seedling. Here Alan sets out the story of his apple:

"In 1984 I moved to Ipswich, Suffolk, to a house built in 1904 on the site of a burnt down old cottage. I do not know if the elderly gentleman who had the house built, planted fruit trees in the garden in the early 1900s or whether trees already existed there, but when I arrived, there were several fruit trees growing, including the one I now believe to be a Waltham Abbey Seedling.

Like the other fruit trees, the Waltham Abbey apple tree was in a sorry state and I consulted an arboriculturalist who advised on pruning and feeding. Most of the trees responded to care, and in the storm on 16th October 1988, the Waltham Abbey survived thanks to the shelter of a large chestnut tree beside it (which was not so lucky). The apple tree continued to produce an abundance of huge apples (some of about three pounds in weight). The apples were usually ready to pick in October and stored in our shed, they lasted well into the following April.

Interested to know more about this tree, I contacted Kew Gardens who requested leaf and fruit samples and subsequently told me that the tree was a Waltham Abbey, quite an old variety and uncommon. I thus (in 1992 or 1993) sent off cuttings to East Malling for grafting on smaller root stock, and after about two years or so, two new trees arrived and thrived. In 1996 I moved to Minster, Kent, took the little trees there, and planted them. Despite my best efforts to treat the problem, one of the trees succumbed to infestation by woolly aphids, and worrying about loss of the second tree, I contacted Brogdale who advised planting a Red Falstaff for cross pollination. The first year, there was a better crop of fruit, but not comparable to the original crop level.

After seeing a TV programme about Ampleforth apples, I contacted Mr. Tim Saxby to ask if they had any Waltham Abbey trees, and he suggested I contact Marcher Apple Network. Samples sent for DNA came back as no match which is interesting as previous possible claimants to being Waltham Abbey Seedling have turned out to be Dr Harvey or Golden Noble. Obviously there is no DNA fingerprint for WAS as it is/was presumed lost. But anatomically it is a good match and DNA-wise it isn't anything else."

Waltham Abbey Seedling ?

Witney's Kernel ?

Witney's Kernel only has one written record, from 1883, as being exhibited from Worcester; there is no description of what the fruit looked like. But in the course of writing "The Apples and Orchards of Worcestershire" and being in the Teme Valley Apple Group, I came across three elderly members who claimed to know this apple. Two old orchards had trees that David Powell of Rochford was adamant were Witney's Kernel. To cut a long story short we DNA'd a sample which came back as no match. So with only the anecdotal local evidence, we are left to assume it is right. One of the old trees is ancient enough to have been alive in 1883 so could even have been the source of the original exhibit. A young tree of it is held at Paramor and a few more grafts were made this Spring. As an apple it is a decent eater. a bit like May Queen in character.

Jolly Miller

The following article is kindly provided by Bob Lever of the East of England Apples and Orchards Project. "Our first record of Jolly Miller appears to be when it was exhibited at the Royal Horticultural Society's Apple Congress, Chiswick, 1883. It is listed in JRHS V10, 1888, in the Descriptive Catalogue of Apples,

"Jolly Miller (Bull). C (culinary). Med ium, flat, angular, flushed red, soft, acid, mid-season; handsome."

In the same publication, we are given details of exhibitor Mr Arthur Bull, Bernard House, Cottenham, Cambridgeshire. It likely that Jolly Miller was sent from this source. Our next record is in 1934, when it was exhibited at the RHS again. "Apples and Pears", a report of the Conference held by the RHS at Crystal Palace, lists Jolly Miller as "Dessert, medium, round; green yellow red; flushed striped." The sources are listed as Norfolk, Cambs.

The list from the 1934 Conference shows two exhibitors from each county, so we deduce that Jolly Miller was sent from Norfolk by either H Goude, Horticultural Superintendent, Norfolk County Council Department of Horticultural Education, 30 Cattle market Street Norwich, or from W J Payne, Station Road, Attleborough. We deduce that is was sent from Cambridge by W F Cheal, Gosmoor

The 'Jolly Miller' at Cottingham

Lane, Elm, Wisbech, Isle of Ely or by K V Cramp, Horticultural Assistant, Shire Hall, Castle Hill, Cambridge. (Shire Hall is the Cambridgeshire County Council HQ). Of course, if the exhibits were sent by either of the county horticultural officers, the original sources may have been anywhere in the two counties!

Jolly Miller was still in existence in the middle of the 20th C. according to H V Taylor, Apples of England, 1946.

"The cultivation of the Jolly Miller, first grown at Cottenham, is practically confined to the villages of Cottenham, Impington and Histon; but some very fine trees of this variety are to be seen at Melbourn"(Bulletin 61).
Taylor describes the fruit briefly: "Small, red, conical and rather tall, greasy skin, soft flesh. Season August- September" which seems slightly at odds with the earlier descriptions.
Muriel Smith, National Apple Register 1971, appears to combine the earlier records.
Status- in existence 1946
Provenance- England, local to Cottenham, Cambridgeshire
Date- First recorded 1883
Description- Size small to medium; shape flat to tall, conic, convex, ribbed on body; skin greenish yellow with red flush and stripes, greasy; flesh soft: flavour acid; season second-early to mid.
The fact that Jolly Miller was chiefly grown around the villages of Cottenham, Impington and Histon suggests that it could have been used for jam making. The Chivers jam factory had an immense influence on fruit growing in that locality from the late 19thC until the second half of the20thC, much of the fruit from the three villages went to Chivers. Until legislation prevented "undeclared" fruits from being included in jam, it was common practice to use early apples or unripe plums to set soft fruit jam. Apples were also used as bulking/ setting agents in jellies and other preserves. They were generally picked rather early, which may influence the recorded season of use.
It was claimed, locally, that the Jolly Miller apple derived the name from the Jolly Miller public house at 73, High Street, Cottenham. It is also said that fruit was traded at the pub. As of March 2019, the building was still standing, but closed for business.

The Jolly Miller apple disappeared from the literature, and seemed to have disappeared from orchards, during the latter half of the 20th C. It is not held in the National Fruit Collection, so was therefore assumed to be a lost cultivar.

In 2004/5, the Cambridgeshire Biodiversity Partnership funded a survey of orchards in Cambridgeshire, in partnership with the East of England Apples and Orchards Project (EEAOP).

During the course of this survey, Maureen's Farm Shop at The Lawns, Somersham, Cambs, was found to be selling Jolly Miller apples.

Maureen's great grandfather, Benjamin Goodger, established Lawn Orchard in 1898. Her grandfather took over the orchard later, then Maureen and her husband took it over in 1995. Maureen had a plan of the orchard and knew the names of the cultivars grown there, including Jolly Miller.

It seems that Jolly Miller had continued to exist at The Lawns, when believed lost elsewhere. Maureen had no idea she was the custodian of the last few trees of this variety.

She kindly gave propagation material to EEAOP, who reintroduced the cultivar in their 2005-6 catalogue, and have distributed it ever since. Jolly Miller, from the Somersham source, has been planted in community orchards and gardens since the reintroduction. It is thought that the distribution of trees is mainly in Cambridgeshire.

Recent DNA analysis has shown that the Jolly Miller of Somersham has no match in the National Fruit Collection, but does match a tree found by the Marcher Apple Network at Bronllys, Powys.

The Rescue of Old Cherry Varieties

What members of the MAN are doing for apples, people in Bewdley are doing for cherries; searching to identify the old, traditional varieties and to propagate them before the last remaining trees die and genotypes are lost for ever.

The district around Bewdley and Wyre Forest, in north Worcestershire, west of the Severn was once the largest centre of cherry production outside Kent. The 1957 Fruit Tree Census showed 8% of the National crop, 59,000 trees, to have been growing in this small area. By the early 1960s the trade had ended and those who once knew which tree was which variety are now unable to say. Today only derelict orchards and decaying trees remain.

The area has been noted for cherries since at least 1650. The Rev. Dr. John Beale FRS (1608–1683), corresponding with Samuel Hartlib (1600–1662), wrote in 1657, "Worcestershire is more proper for pears and cherries and Herefordshire more proper for apples." The Florist, John Rea (1605–1677), of Kinlet just north of Bewdley, a leading plantsman of his time, in his 1665 book '*Flora, Ceres and Pomona*' described sixteen sorts of cherry. He first used the term 'Dukes' for hybrids of acid and sweet cherries and named one 'Carnation' still in the National Collection. The pioneer of 'scientific horticulture' Thomas Andrew Knight (1759–1836), a son of the Rector of Bewdley, raised several new cherries which are still growing in local orchards. These were the first results of controlled breeding with known parentage.

A Fair in Bewdley was set up by King Edward IV in 1472, on St. Anne's Day, 26th July. This became a Cherry Fair, when or how is not known, but as far as we do know it is now the only one of its kind in the country, at least since 1817. In 1886, 110 tons of cherries passed through Bewdley market, and in 1907, 200 carts congested the town, prompting police intervention. Bewdley Civic Society, jointly with Bewdley Museum, revived the annual cherry fair in 2011, offering a range of cherry trees and cherry varieties for people to buy and taste, hopefully generating interest and awareness of the heritage of varieties and flavours which their forebears enjoyed.

An as yet unidentified cherry from an old orchard.

Cherries have always been a challenge to produce, although popular and commanding good prices. The traditional wild stocks produced large trees. These grew for years before being fully productive. Cherry scions were not self-fertile and, with about a dozen pollination groups, suitable pollinator varieties were needed through the orchard. Even then, cropping was unreliable, dependent on weather, vulnerable to frosts, rain, birds, pests and endemic diseases. The fruit was difficult and costly to pick, and very perishable. All these factors made cherries uneconomic in the 1950s. The scientific name for sweet cherry, *Prunus avium*, summarises the situation.

Identifying cherries, unlike apples, is not a practical option. DNA analysis is the only realistic alternative. The importance of the different varieties is not merely the names, but the distinct genetic make-up within each. It is important to retain these genetic resources, particularly the local 'land-race' of unique West Midlands types, including the wild Mazzards in the Wyre forest, formerly used as rootstocks, but also part of the Prunus genome. All would be adapted to local climate and soils.

Unlike other temperate fruits, such as apples, breeding new varieties of cherries and developing new cultural techniques has been neglected and relatively little research undertaken world-wide. Until about 1970 world production relied on traditional cultivars, which arose, like apples and other fruits, from selection by observation, and using wild, vigorous rootstocks. It is the genetic resources of the old varieties which must be the foundation upon which future research and development needs to be based. However, several innovations since 1970, have re-vitalised profitable production, now expanding in over 40 countries.

Cherry detective Brian Stephens

Firstly, a self-fertile cultivar, Stella, was released in 1970, by K.O. Lapins, at Summerland Research Station, in British Columbia. Stella, from a cross between Lambert and the self-fertile John Innes seedling 2420, has been used extensively in breeding programmes and a number of new self-fertile cultivars are now available. Secondly, has been the introduction of dwarf and precocious root-stocks from hybrids of the three main cherry rootstocks, *P. avium, P. mahaleb* and *P. cerasus*. The first was Colt, (*P.avium* x *P.pseudocerasus*), a semi-dwarf stock with which virtually all scions are compatible, introduced by Webster at East Malling in 1980. An extensive breeding programme at Giessen in Germany (1985) produced a series of dwarf stocks, GiselA, mostly *P.cerasus* x *P. canescens*. Other dwarfing stocks are derived from crosses with *P.cerasus* x *Landrace* cultivars. Gisela 5 and 6 seem most widely used for selected varieties. A further stimulus was the 1996 publication of a review of cherry biology and production by A D Webster of East Malling and N E Looney of Summeland, BC. With this impetus for research and development both sweet and sour cherry production world-wide has increased steadily over the past twenty years.

Most countries producing cherries now have research and breeding programmes and many have collections of cultivars to conserve Prunus genotypes.These germplasm collections need to be co-ordinated with standardized fingerprinting to improve discrimination. Field collections are expensive to manage and are exposed to pests and diseases so there is need for backup collections and *in-vitro* cryogenic storage. Genotypes need to be characterised and evaluated since many synonyms and the complex taxonomy of Prunus make for confusion. Maintaining the genetic diversity of specific genotypes, such as old land race cultivars is difficult. Molecular genetics will permit more characters to be developed when genes have been identified.

Parallel with the above developments, new horticultural techniques of cherry orchard management have been introduced. Smaller trees allow high density planting, earlier yields and less labour. In cooler or wetter conditions trees can be grown with protection for blossom and fruiting periods. These new methods in turn require new methods of pruning. In consequence new research is necessary to understand more fully plant water relations, nutrient uptake and many other aspects of cherry tree and fruit physiology. With further research the full potential of this fruit can be realised.

Further research will be required to support responses to climate change, with an expected impact on water and nutrient availability, temperatures, flowering times, chilling requirements and more extreme climatic events. With international trade, the spread of exotic species is a problem. An example is the Asian fruit fly, , which has rapidly become established in Europe and North America attacking most berry fruits, cherries and grapes. It is not yet known (2017) if the means to resist or tolerate such hazards even exist in the cherry genome. Who knows, it may be found in a West Midland variety.

With the support of The Wyre Forest Study Group www.wyreforest.net and Bewdley Civic Society, www.bewdleycivicsociety.org.uk and funding from a local source, our Cherry Rescue Project can sample local cherry trees for DNA analysis at East Malling. Samples have already been sent for analysis and results, expected later in 2019, will be compared and matched to other similar analyses.

The project is to screen by DNA analysis as many local cherry trees as funds allow, then to propagate from the known varieties as a genetic resource. From this, a type collection of known provenence can be established. Further propagation from the known varieties could supply graft-wood for wider distribution, and perhaps, eventually, harvests of fruit from the old varieties.

Brian M. Stephens

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Organic Pest Control

Whilst watching an episode of the BBC's 'Countryfile' two or three years back there was a piece about a cider orchard in Somerset where the owner had put up large numbers of tit boxes in his orchard on the basis that a blue tit or great tit will feed 200–300 caterpillars a day to their young and if they are nesting in your orchard and eating pesky caterpillars then hey ho... win, win.... free organic pest control.

Only problem in my orchard is that the trees at 5 years old or less are too small to have a box fixed to them so I experimented with putting in some posts and attaching the boxes between 3 and 4 feet from the ground. In the first year (2018) nothing used any of them but in 2019 success as blue tits nested and raised young and I watched as they worked the fruit trees harvesting caterpillars and taking them back to the young in the box. In one of the other boxes a colony of tree bumble bees took up residence for the summer. Thus, a simple act of providing a few bird boxes yields great results for our wildlife and acts as pest control.

Wade Muggleton

New Ventures for Tom the Apple Man

We asked Tom Adams (or 'Tom the apple man' as he seems to be best known as) who has done extensive work for MAN to tell us about his nursery and his newest venture...

I run a one-acre fruit tree nursery on the North Wales/North Shropshire border. It is not registered organic but I closely follow organic standards, using no synthetic pesticides or fertilisers. The trees are grown by myself and some volunteer labour in beds that are kept weed-free by the use of a hoe or with a thick mulch of willow wood chip grown on site. We use a fortnightly spraying regime of seaweed extract and garlic oil as a pest deterrent and a foliar feed. Pest predators are attracted to the site by a range of flowering plants, such as lavender, ox eye daisy, poached egg plant, oregano, chives....They are encouraged to overwinter on-site in the many bug refuges placed around the nursery. I grow a wide range of heritage varieties and varieties that grow well organically (i.e. showing disease resistance), as well as varieties that grow well in not so favourable conditions. I have been working closely with the MAN and the Welsh Perry and Cider Society growing and rescuing many rare varieties from extinction.

In August 2018 we bought six acres of pasture land for a new nursery site. In November 2018 we registered the land for organic status. The field is 140 m above sea level, with a very gentle south-facing slope and abutting a mixed woodland to the north which provides shelter from the winds, while mature garden trees provide a windbreak from the south. I will work on continuing soil improvement throughout my time managing this field. My techniques for soil improvement will be the continuous addition of

- compost made on site,
- green manures,
- ramial chipped wood (rcw)
- biochar

This field hasn't been ploughed for well over twenty years. I intend to keep it that way. My technique for creating new nursery beds will be to sow a range of green manures. Some of these will be deep rooted and will serve to break up the soil, bringing up minerals from deep down and aerating the soil as they die off. These beds will then be heavily mulched with rcw to kill off the green manures prior to planting rootstocks. This method will create a good healthy soil structure with minimum amount of soil disturbance.

The rootstocks, which will be a range of apple, damson, cherry, pear, plum, quince and sweet chestnut, will be grown in 25 m wide fields, in an alley-cropping style using agroforestry techniques. Separating each field will be a 10 m wide strip of short rotation coppice (src). This strip will serve many purposes. It will:

- comprise mostly of *A. glutinosa* and *Salix* spp.
- Act as a windbreak;
- Be under-planted with bulbs to create a woodland habitat;
- Act as a wildlife corridor;
- Be coppiced on a regular basis to create rcw and biochar.

These areas will run on a north/south axis. Willow and alder will form the main bulk of the species but they will also serve as areas with great biodiversity.

I believe that biodiversity is the key to growing healthy trees and fruit. The new nursery site currently has three trees, lots of grass and 50 sheep! I have already begun the biodiversity enhancing process by over-sowing the sward with chicory, clovers, yarrow, birds foot trefoil and plantain. Most of these plants have deep taproots that will work their way deep into the soil, bringing minerals to the top soil and breaking up compacted areas, enhancing aeration and permeability.

I have just finished making a batch of bird and bat boxes. The bird boxes are designed to attract blue tits which love to eat aphids. The bat boxes will attract bats that predate on one of the most common apple pests, the Codling Moth. Owl boxes and perches for raptors will help to keep down the numbers of voles. These cute little creatures have caused me some expensive losses to nursery stock in the past. By creating a healthy, vibrant biodiverse flora and fauna, I am using nature and nature's systems to carry out my pest control. The better this system is designed, the less work I need to do.

My nursery will be free from single- use plastics. The horticultural industry is rife with plastics. From Sellotape-like tree ties to plastic labels to ground cover. All these things, once finished with, become landfill. Instead of using plastic to tie our trees to canes in the

Pollinator-friendly under-planting adds to orchard health.

Volunteers carrying out orchard maintenance

nursery, we use both a natural jute string and a natural cordage from New Zealand Flax.

The tree labels are made from a durable paper. I have been working very closely with MAN on authenticating the names of many heritage varieties using DNA fingerprinting.

Since the cost of DNA testing has massively reduced over the years, it has allowed us to be absolutely certain as to the names and synonyms of many varieties. The testing has highlighted many mis-named varieties and allows us to put the correct name to the correct variety.

Before the testing became affordable, identification of old and 'lost' varieties was extremely difficult. I will be selling authenticated varieties from a known mother source with their own DNA fingerprint certificates to ensure the correct name of each variety.

Tom Adams

Our first attempt at mechanical planting.

Orchards as Dangerous Places

It is easy to mock modern Health and Safety; we all do it..... "Oh for goodness sake... not more Health and Safety... !!!" but we forget or are unaware of what dangerous places orchards were and the perils faced by those working in them.

For the items below we are indebted to David Everett, volunteer at the Worcestershire archive for painstakingly researching the historic reports of these sad tales of orchard fatalities.

Worcester Chronicle 1901

Bewdley – Fatal Fall from Tree

"An inquest at the Town Hall, Bewdley on the body of William White (40) fruiterer of Wyre Hill who was killed on Thursday by a fall from a Pear tree. The deceased had purchased the fruit in a portion of the orchard belonging to Mr Westley and was gathering pears from the trees. He was on the top of a 45 foot ladder, and had one foot on the ladder and the other on a small branch which giving way under the pressure caused the deceased to fall to the ground. The injuries were terrible and death was instantaneous. The skull was crushed, the upper and lower jams broken and the neck dislocated.. The Coroner said it was a sad case, but it was evident that no one was to blame."

Worcester Chronicle 1896

"Crowle – Inquest at Worcester Infirmary – in respect of Charles Edward Salisbury who fell from an apple tree when gathering mistletoe at Crowle, a companion said the deceased had fallen about 15 feet was admitted to the infirmary but died later of a ruptured intestine and peritonitis. The jury recorded a verdict of accidental death.

Worcester Chronicle 1895

"Fatal fall from Ladder near Worcester George Hill (23) of Shelsey Beauchamp died in Worcester Infirmary from the effects of injuries received while picking cherries, and although he received every attention in Worcester Infirmary death ensued from concussion of the brain and fracture of the skull."

Worcester Herald 1879

Inquest into death of William Lloyd who fell from an apple tree while harvesting Mistletoe, the bough on which he was standing having given way. On not returning home his son had set out to see what had become of him finding him stiff and cold at the foot of the tree, he had bled a great deal and his thigh was broken, Verdict Accidental death.

The records pile up:

1889 William Gittus of Worcester died from injuries sustained in falling from a pear tree.

1892 George Hooper (46) died from injuries sustained falling from a tree whilst picking cherries in Leigh Sinton.

1899 William Hanson (52) died from injuries sustained falling from a ladder while picking fruit at Kempsey.

1886 Thomas Tarpey (64) of Kidderminster died from injuries after falling from a tree while picking fruit.

A lucky few lived to tell the tale:

Worcester Journal 1892

"Fall from a tree – John Davis (43) of Worcester who was cherry picking at Knightwick on Monday fell from a tree and fractured his arm, besides suffering a severe shaking. He was treated at the infirmary."

Worcester Journal 1884

"Eastham – A Lucky Fall – a man named Stinton was near the top of a 40 foot ladder with a three bushel bag when he over balanced and the ladder turned over taking Stinton with it at a rapid rate. Fortunately he was not hurt to the great surprise for those that witnessed the occurrence."

These are just a sample of a good number recorded in the various papers and journals of Worcestershire. Horrific accidents the majority of which seem to have died after the event of appalling injuries.

A reminder to us all to take care when it comes to orchards, lad ders and whatever takes us up them be it picking or pruning, and a reaffirmation of how there was absolutely no such thing as the 'good ole days'.

compiled from research by

David Everett

Snippets from the National Perry Pear Collection

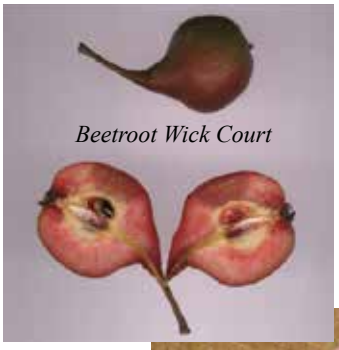
I have for some time been interested in red-fleshed pears and we now have 13 different varieties for further research. Not all of these may necessarily be accepted as perry pears. In common with most pears, there appear to be two forms, the early ripening softer, and the later ripening harder types. In Britain these are generally referred to as Blood, the earlier type, and Beetroot, the later ripener. In Germany and Austria the earlier are called Sommerblutbirne, and later ripening Blutbirne. We have both these in the collection, but they have yet to fruit. In Denmark the equivalent early type is known as Rød pære. The Sanguinole is an early red-fleshed pear of some antiquity now found in many parts of Europe. It appears to have originated in Italy. Edward Bunyard mentions that it could still be found in some cider orchards.

I have also been looking for the equally ancient Italian pear Cocomerina, in the hope that it might throw some light on the origins of red-fleshed pears. The name Cocomerina comes from "cocomero" meaning watermelon, and refers to the pink colour of its flesh, especially intense in late-harvested fruits. The pears are said to be excellent for making jams and liquors.


Cocomarina

This variety is cultivated at present only in the Apennine area of Romagna and Tuscany, but in Bosnia there is a group of red-fleshed pears known as Lubenicarka, (also meaning watermelon), which may be similar. In a research project organised by the Faculty of Agriculture, University of Banjaluka, the most coloured flesh was found in the "Krupna Lubenicarka" variety, which also had the highest content of anthocyans.

The wild (feral) pear from which perry varieties are believed to have originated as a result of natural hybridisation between *Pyrus pyraster* and *Pyrus caucasica*, most probably first


Beetroot Wick Court


Blood pear

appeared in the Caucasus, spreading through the Balkans across Europe. So the red-fleshed varieties, if they had by then acquired their colouration, may have followed the same route. As would be expected, there are two cultivars of Cocomerina, an early-ripening one whose fruits are harvested in August, and a late-ripener harvested in October. This is very similar to the distinction between our Blood (early ripening) and Beetroot (late ripening) pears.

My having finally obtained scions of Cocomerina, (from Karl Franzens University in Graz, Austria), Nick Dunn of Frank P. Matthews Ltd. kindly grafted them for the National Collection. I have recently been researching them further, particularly to discover what is known about the health benefits of the red-fleshed pear.

Browsing the internet, I found an interesting report by the Department of Biomolecular Sciences, Section Plant Biology, University of Urbino, Italy entitled "Fresh Juices of Cocomerina Pear an Ancient and Rare Fruit with Red Pulp: A New Source of Polyphenols for Human Health" with research conducted by Laura Giamperi, Donata Ricci and Anahi Elena Ada Bucchini. In their conclusions, they say: The results, while still in the preliminary phase, have shown that the fresh juice (especially the "cocomerina" pear late type juice) is particularly rich in polyphenols, anthocyanins and flavonoids and consequently showed significant in vitro antioxidant and anti-inflammatory activity when compared with other fruit juice. Our results confirm the importance of further enhancing the fruit trees which seem to have been forgotten, taking into account that often the old varieties are those most suitable for agriculture with a low environmental impact. The National Perry Pear Centre and Marcher Apple Network have for a long time, drawn attention to the potential genetic value of their collections of local varieties, both on account of their resistance to many pests and diseases and for their possible contribution to the challenges of climate change. This Italian report also highlights the potential that red-fleshed pears might have to contribute to our own health and wellbeing! Anthocyanins are responsible for most of the red, blue and purple colours in fruits and are particularly abundant in berries, red grapes and red wine. The report also revealed that the later ripening Cocomerina pear in particular also had high anthocyanin levels in both its skin and flesh – considerably greater than in the earlier ripening variety. The consumption of products rich in anthocyanins has been shown to be associated with a lower risk of cardiovascular diseases. Anthocyanins also display inhibitory effects on the growth of some cancer cells.

In this country, the earliest reference I have found to red-fleshed pears is in John Parkinson's Paradisi in Sole, Paradisus Terrestris of 1629, where he refers to the Blood Red Pear having a dark red colour on the outside but piercing very little into the inner pulp. John Rea in Flora, Ceres & Pomona 1665 mentions the Bloody Pear, having red flesh, as does John Worlidge in 1691. In 1752, Philip Miller in The Gardener's Dictionary refers to Choak Pear – so acrid that it produces a choking sensation, whose flesh is red, but which is rarely cultivated. This may be the first reference to a probable perry pear having red flesh.

Thomas Knight in his garden notebook (now in the Herefordshire record office) records his experiments, which include the crossing of the white-fleshed Bergamot with the red-fleshed Carmine Core that is referred to in his Treatise on the Culture of the Apple and Pear, and on the Manufacture of Cider and Perry 1797. Carmine Core is also mentioned by Herbert Durham in 1923, but without recording where it was found. The only red-fleshed pear mentioned in Luckwill and Pollard's Perry Pears in 1963 was the Bloody Bastard from Staunton, which they were unable to trace. Long Ashton Research Station however had discovered two of the three examples of the Wick Court Beetroot pears in 1958. One they

described as red-fleshed and one, pink-fleshed. They found that the colour did not remain after fermentation. Possibly this was because they used the early ripening Wick Court Eric (more properly a Blood not Beetroot pear), because Day's Cottage, using Wick Court Alex successfully produced a pink perry in 2011 – I still have a bottle, the perry remains coloured in 2019.

In 2007 a pear, possibly the elusive Bloody Bastard of Staunton, was found in the neighbouring parish Hasfield. This, very early pear, is also now in the National Collection, called simply Blood Pear. A considerably older matching tree has been found in neighbouring Ashleworth and an elderly lady recalls her father-in-law using it to graft the Hasfield pear. Whether this is the Bloody Bastard found in 1963 will however never be known. Even more recently a Beetroot type pear has been found in an old orchard near Kidderminster and reports of other red-fleshed pears have been received.

To summarise, the red colouration of the flesh of some perry pears occurs in most parts of Europe and was probably first acquired east of the Balkans. Its rarity suggests that it is generally lost when cross-pollinating with white-fleshed pears. Analysis shows that the anthocyanin content was radically greater in later ripening fruit and was actually enhanced by low temperatures. Content was still significant (though far less) in unripe fruit from later ripening varieties and in fully ripe fruit from early ripeners.

Should we perhaps be promoting the health-giving properties of pink perry !

Jim Chapman

Adapted from the forthcoming publication "Perry Pears", Volume 2 in the Gloucestershire Pomona series

New Friends in the North

We're delighted and surprised to have a couple of new members of MAN from West Yorkshire, who were keen to obtain some scion of our Marches varieties so I will let them introduce themselves.

"Hi! We are David Mitchell and Gary Johnson. We are both plot holders on a small Allotment site of 23 plots in Queensbury, West Yorkshire, half way between Halifax and Bradford. At an altitude of 1,200 ft, as there is no possibility of growing standards or half standards apple trees on the site, all our apples are in restricted forms, cordons, espaliers and large potted specimens.

We are both collectors in a small way of rare apples and between us we have over 100 varieties, not all rare I hasten to add. David is a member of the Northern Fruit Group. Last year Gary came across MAN on-line. We are both very interested in what you as an organisation are doing to preserve rare apples in your part of the country so we decided to become members of MAN. Shortly afterwards we bought a copy of the 'Welsh Marches Pomona', We found it very interesting and informative, with many apple varieties we had not come across before. Gary enquired about whether we could get some scion from your collection, as we were interested to know how these varieties would thrive in our different conditions. Your Secretary was very helpful in supplying the scion. We asked for about 20 in total between us, the bulk going to Gary as I have very limited space since I collect rare Yorkshire varieties much in need of saving before it is to late, very much like MAN is doing with your collection. The scion we had asked for was very kindly sent to us and we whip and tongue grafted them, mostly in March, on to M106 and M27. As I write this (June 19) most of the grafts have taken so now we await the fruits of our labours.

We would like to say a very sincere thank you for all the help we have received and wish all a happy and fruitful growing season in the Marches.

David Mitchell

It is great to find fellow enthusiasts in other parts of the country equally passionate about rare and heritage fruit varieties so we will await reports with interest as to how well our MAN varieties do in the hills of Yorkshire.
- Ed.

A Scottish Highlands Oorchard– 2019 update

MAN members and former Lucton School teachers Peter and Janet Tyler, who moved from Herefordshire to the Scottish Highlands in 1995, report on the latest developments from their Highland Orchard project.

Set up in 2005 south of Inverness (A&P 2009; A&P 2012), we have seen a range of changes in recent years, including the erection of a deer fence, so that the threat of browsing damage on lower branches and stag antler velvet rubbing on trunks has been reduced. I still protect young trees with a metre square of sheep netting. Rabbit and vole numbers fluctuate and the brown hare is a frequent visitor, so I protect the lower stem with either cut down tree tubes or spiral guards. The recycled silage wrap used to suppress grass and weed growth around young trees is removed after a few years and replaced by leaf mould.

Established trees with leafmould mulch and no netting

The windbreak hedge on the upper southwest border is much improved, with the hawthorn now up to two metres tall and doing a much better job than the broom I planted initially. The holly and hazel included in the windbreak are good aesthetically and functionally, though actual hazelnut production is sparse. It is too cold here for good pollination when the male catkins and female flowers are produced; better nut production occurs by the shores of Loch Ness at near sea level.

I have found MM106 rootstock produces the optimum sized tree so most varieties are grafted on it, although M26 and M25 are also used. The slope of the orchard, facing southeast, is now extensively terraced with paths along the contours. The apple varieties now total over 100, with several duplicate trees. There are also eight plum varieties, which in some years give good crops, but now only two pear trees (Hessle and Conference), as pear fruit production was consistently poor.

I consider temperature to be the main climatic feature affecting apple tree performance here. The daytime and night time temperatures are nearly always 2°C below those in Inverness, which will be lower than those in Edinburgh and so on until comparable with the higher levels experienced in the MAN area. Thus rates of photosynthesis will be lower here and growth similarly reduced. We do gain with more hours of sunlight during the summer, but a weak low lying sun is not very beneficial. I find that late maturing fruit varieties are not generally successful. For that reason I gave up and removed a Marjorie's Seedling plum; among the apples Court Pendu Plat and Adam's Pearmain suffered the same fate, while Winston, Saint Cecilia, Jonathan, Lord Hindlip, King's Acre Pippin and William Crump rarely yield good fruit. However, Annie Elizabeth and Edward VII are able to produce good crops.

Planting the 100th variety of apple - Beauty of Bath

The most critical temperature effect is that of frost. The risk of frost continues well into June — there have been five years out of the last ten with June frosts, the latest June date being 23rd in 2008. The actual flowering period for the apples usually begins in the last week of April with Oslin and continues into June with cider varieties such as Medaille d'Or. Within that period there can be many periods without frost and I consider the best protection is to have enough varieties with different flowering times to coincide with these milder periods. The usual advice, i.e. to plant late flowering varieties, does not really apply here, although it may be useful further south and at an altitude lower than our 600 feet. There is considerable variation in frost resistance between varieties, not always linked to their geographical origin. Thus Onibury Pippin from the MAN area shows resistance here, whereas the Scottish Thorle Pippin, Tower of Glamis and even Coul Blush from north-west of Inverness are susceptible.

There is an interesting aspect to frost damage; down to –5°C the open blossom is destroyed, but flowers still in tight bud stage will be safe. However, at –6°C those buds later open to show considerable deformity or damage and fail to set fruit. One of the few varieties to resist even –6°C is Tam Montgomery (Early Julyan). There is also the effect of microclimate, bearing in mind that cold air is denser and rolls downhill to collect in frosty hollows. I currently have a Discovery at the bottom of the slope with no set fruit and another elsewhere above a drop to lower ground and bearing plenty of fruit. Trees on M26 carry their blossom low down, so are more likely to suffer frost damage. Hence I prefer to use MM106 and find fruit setting above about 2 metres after a mild frost; such examples this year including Devonshire Quarrenden, King's Acre Bountiful, Pomeroy of Herefordshire and Sweeney Nonpareil.

Even my grafting can be affected by the weather. I carry out whip and tongue grafting at some time in March and April, but the timing can be crucial. I believe the callus tissue around the graft does not form below 5°C and a long period above that temperature is important. Thus a fortnight of mild weather is more important than the two-week waxing moon period, which I have tried with little success. At least I can always blame the weather for my grafting failures.

The weather can also influence disease and pest incidence, especially in an organically maintained orchard. Scab has never been much of a problem; it is no wetter here than it was at Wigmore in Herefordshire with an annual rainfall of about 40 inches. Fortuitously our lower spring temperatures are useful

in hindering the release of the scab fungal spores onto developing leaves and then fruits. However, spring 2019 included enough warm periods and rain to initiate some scab infection, e.g. on Greensleeves and Cutler Grieve.
The cider varieties seem to do well up here — in 2018 we had enough fruit from one 12-year old Yarlington Mill on M25 to obtain juice to fill one demijohn for cider. The nine cider varieties are mostly on M25, planted along the windier south west border, but they cope very well, flower late (apart from Dymock Red), are of interest to visitors and earn their keep.

Could the Scottish Highlands be the next cider country? Although the orchard contains several young trees, there are several which have been here long enough to show if they can thrive in these conditions. Of these varieties the top eaters include Discovery, Katja (Katy), Red Lady Sudeley, Red Charles Ross and the less well known Cambusnethan Pippin, which in a good year can taste like an Egremont Russet, but is not so dry. The top cookers are mostly early varieties including White Melrose, Emneth Early (Early Victoria), Keswick Codlin and Grenadier. The good later cookers include Hawthornden, Annie Elizabeth and Edward VII. If I were on Desert Island Discs and could choose only one apple it would be.....White Melrose.

Peter Tyler

Broxwood Foxwhelp cider apples

White Melrose appples

Herefordshire to Host International Cider Celebration

Herefordshire is to host the first conference of the recently-formed International Network of Cider Culture and Tourism Destinations this autumn. As interest in cider continues to grow throughout the world, 'Ciderlands' as the network is known, seeks to promote travel and cultural exchanges between classic and emerging cider regions, as well as to act as a cider tourism beacon for the world as a whole.

Comprising four days of activities across the county in peak harvest time, Ciderlands 2019 will offer an unparalleled showcase of the region's proud cider heritage to the cider tourism professionals from throughout the network. In addition, notable public events will offer the opportunity to leave a legacy of celebrating the region's unique cider culture within the local community. Delegates will enjoy the full Herefordshire experience, with visits to classic country pubs, a tour of the Mappa Mundi and the opportunity to visit The Big Apple's Harvestime festival, complete with traditional cidermaking and apple displays.

Crucially, Ciderlands provides an opportunity to remind Herefordians of cider's great heritage as well as the role that cider continues to play in the county. A 'Cider Celebration' will take place at The Cider Museum on Friday 11 October, to which MAN has been invited to have a stand there, while The Green Dragon will host a Cider Banquet, the like the City has never seen before, on Saturday 12 October.

Support for this event comes from The Pippin Trust, the Three Counties Cider and Perry Association, plus a host of cider producers.

Register of local cultivars – Accreditation

We reported in the Spring News Sheet on the Accredation Panel meeting at the University of Reading on 6th Novemebr 2018. MAN submitted nine varieties and five accepted for accreditation to the Register of Local Cultivars.

Bob Lever has commented: "The work that MAN is doing on finding old CVs [cultivars] is marvellous. Please send my congratulations to the team!"

Name	*Sample*	*Panel notes*
Barcelona Pearmain	A356	Striking resemblance to literature gives accreditation on balance of probability. It may be that there are European comparisons available in the future.
Bringewood Pippin	A362	Name accredited to DNA Fingerprint in 2018 for cultivar previously thought lost.
Gipsy King	A398	Name accredited to DNA Fingerprint in 2018 for cultivar previously thought lost.
Pig yr Wydd	A464	Name accredited to DNA Fingerprint in 2018 for local cultivar.
Spring Grove Codlin	A388	Name accredited to DNA Fingerprint in 2018 for cultivar

For a further three, more research was requested.

Name	*Sample*	*Panel notes*
Black Gilliflower (RLC)	A358	Further research to get comparative DNA value e.g. US samples.
Gabalva (RLC)	A393	There is limited evidence in historical documents. Investigate if pictures in Lindley Library or Journal entry
Sweeney Nonpareil	A485	Panel suggested seeking an illustration in Lindley Library (RLC) and Brogdale in case there is a reason why this is not Sweeney Nonpareil.

Jim Arbury of the RHS has confirmed there are no photos in the Lindley Library of Gabalva and Sweeney Nonpareil. Contact with Professor Greg Peck of Cornell University in USA has confirmed that the DNA FP for our copy of Black Gilliflower matches theirs to within a reasonable margin of error. We re-presented the evidence (or lack of it) for these three at the next meeting and are gratified that they have now been accredited. The remaining submission was noted to be close to the description of Wormsley Pippin in the Herefordshire Pomona, but the Panel noted two significant differences. We are also pleased to report that Bridstow Wasp and Doddin were accreditted. With some further work we think that Welsh Pitcher, which was first presented in 'Apples and Pears' Vol. 2 no. 4, will be approved in November.

Two Accreditation panel meetings are planned in 2019. The first meeting is at the Cider Museum on 14th August and the second again at Reading University on 13th November. Marcher Apple Network, The Pippin Trust, Hartpury Heritage Trust and Gloucestershire Orchard Trust are supporting this financially and participating. Early apples, notably cider varieties, and perry pears will be the focus of the first meeting. A further 17 are being considered for presentation this year and already another four proposed for 2020. As we have to have historic descriptions of old cultivars, samples and photographs of fruit, and the DNA FP, some of these will have to be deferred as this year's harvest looks to be small. Indeed many trees at Paramor and Tredomen have no fruit at all.

Name	*Sample*	*Panel notes*
Wormsley Pippin (RLC)	A516	Sample is missing the cavity thickly line with russet described in Herefordshire Pomona. More samples / images requested for reconsideration in 2019.

Identification report

Many thanks to our regular identifiers; we are grateful to John Savidge for bringing his invaluable database to every session. As we did not attend Malvern, nor advertise our ID services for postal receipts, fewer samples were submitted by the public. Also cold wet weather during Autumn 2018 may have discouraged attendance at shows. At the eight events we attended a total of 225 samples were inspected and some of the more unusual varieties seen are noted below:

- Haughty's Red (Tenbury)
- Witney's Kernel (Tenbury)
- Neidz Vetriana (Big Apple)
- Wyken Pippin (Big Apple)
- King George V (Big Apple)
- Gascoyne's Scarlet (Leominster)
- Royal Jubilee (Leominster)

A further 27 sets of samples were submitted variously by post, from members, neighbours and Hereford Cathedral.

With fewer apples received, we were able to concentrate on apples from our own orchards. First fruits from young trees at Paramor (38) and Ty Glyn (18) were matched against that of trees from which scions had been taken, thus enabling us to transfer the DNA fingerprint identification of reference trees (e.g. at Lower Ffordd-fawr or Tredomen) to their clones at Paramor and Ty Glyn. A number of unknowns were identified, and a few tentative identities suggested such as the Ludlow Longnor apple might be Bringewood Pippin or The Grange Apple; from the DNA FP it matches a variety originally named as Fish's Pippin but now denamed by the NFC.

The table above right allows comparison of this autumn's activity with the previous four years.

	2018	2017	2016	2015	2014
Identification panel meetings	6	9	7	9	6
Events at which MAN offered identification	9	9	9	10	8
Total identification sessions	15	18	16	19	13
MAN hours involved	306	465	476	465	310
Number of samples examined	352	350	530	618	375
Number of exhibitions staged	2	3	3	3	4
Most productive events for identification					
	Tenbury (81)	Big Apple (74) (2 days)	Big Apple (109) (2 days)	Tenbury (109) Big Apple (60)	Leominster (62)
	Big Apple (76) (2 days)	Malvern (54) (2 days)	Leominster (85)	Malvern (79) (2 days)	Tenbury (56)
	Big Apple (55) (2 days)	Chepstow (42)	Chepstow (68)	Marcle (76) (2 days)	Marcle (55) (2 days)

Overheard at Apple Days....

Those of us crazy enough to look at, and sometimes even to try to identify, apples get rather tired of explaining how you really do need six to ten of each sample variety to have even a hope of identification: this is to get a true representation of what they are really like. Hence we can sometimes appear a tad grumpy when a member of the public pulls a single shrivelled specimen from their pocket and expects an instant identification. So we thought we would compile a few of the more unusual and sometimes humorous comments made or overheard at Apple Day events across the decades.

Man pulls one apple from bag: " I bought this one as it seems a bit different to the rest of the ones on the tree"

Man pulls very small apple from pocket: "They are normally much bigger than this but it was the only one I could reach"

Lady: "I haven't got the apple with me, they are back in Hertfordshire(!) but they are large, yellow and fluffy, do you have any idea what they might be?"

Elderly gentleman: "I don't know what they were but when I was a lad we had this huge tree with bright red apples that were delicious, any idea what they could have been?"

Rather large posh gentleman with a bag of Newton Wonders:
Identifier: "Well, it's a cooking apple".
Gentleman (in loud booming voice): "they are not cookers, I eat them!"
Identifier:"Well you may eat them but they are classed as a cooker."
Gentleman (even more booming): "No No they are **not** cookers". (*The identifier really thought it was pistols at ten paces, he was so animated on the subject)*

While helping on the stand at Leominster about five years ago, a lady brought in a couple of amazing apples — large, classic oblong/conical shape and a vibrant mahogany red and asked us what they were: "I bought this tree at Aldi as a 'Bramley' but I don't think that's right, is it....?" (*Stiffled giggles all round.*)

A lady accosted a well known pomologist (and academic) at an event where there was a huge display of many hundreds of varieties ... her complaint to the pomologist was that the display had 'illegal apples' and he was going to be 'reported to the EEC'. The perplexed gentleman dared to ask the lady why they were 'illegal' ?. If looks could have killed ... and then in an even louder voice came forth her considered reply ... 'they are illegal because I can't buy them in WAITROSE of course.'

A lady opened a carrier bag and produced a shiny red apple - polished and without blemish ... the identifier immediately seized on the fact that it was a Spartan and a very well grown one at that ... a rather put out lady put the apple back in the carrier (the identifier hadn't even taken the apple from her hand) and she produced another apple - a shiny green one this time ... same again, no need to take the apple ... it was a Granny Smith. At that point a blue sticky label was spotted, just emerging from behind the apple as the lady held it ... she had bought them earlier in the day from Morrison's! Rather put out but not admitting to what she had been told, she then commented, I don't supposed you do pears do you? producing a Conference from the bag, with the label still stuck to it!

A gentleman had borrowed a wheelbarrow to bring his prized hoard of fruit in for identification, all the apples were in the barrow along with assorted plant pots all carefully labelled with his codes ... the snag immediately became apparent to everyone: the apples were not in the pots but in a pile in the bottom of the barrow. Upon being asked, the gentleman confessed, that he had pushed the wheelbarrow over a speed bump coming from the car park into the venue and, as you will by now have guessed, the pots lifted, they tipped, and the contents of the individual pots were now nicely collected in the bottom of the barrow - all mixed up!

Often encountered "I have these apples they are really like a Bramley, but not a Bramley!" [Note:They almost always **are** Bramleys, there must a Bramley Denial Society whose members wish their apple was a more interesting variety than just Bramley.}

Obituaries

Sadly, as from 2018, two members who have had a great influence on MAN and its development are no longer with us.

Thanks to the *Hereford Times* for kind permission to reproduce this Photograph

Early days of MAN :
Back Row: Sheila Leitch, Diggory Kempton, Adam Austerfield, Peter Austerfield, Colin Henderson, Ray Boddington
Front Row: John Aldridge, Tom Froggatt.

Tom Frogatt

Tom was one of the early members. He had an orchard of unusual varieties at the Mill in Ashford Carbonel and had worked as a Banker. He brought a long and deep knowledge of apples, of people and of helping them to work together. He stepped in with enthusiasm, supporting, organising, getting a bank account and defining its remit, as well as hunting for 'lost' traditional varieties of apples.

Peter Austerfield, our former Chair of Trustees, remarked that he "was a valued member of our identification group, bringing his substantial knowledge of apples to good use as we puzzled over fruit brought in from our shows. Furthermore, he was always on the lookout for information about apples and orchards, often bringing cuttings and articles to our attention. We probably would have missed quite a few things without his eagle eye."

During the 1990s several orchards were established. Members, including Tom, attended many regional shows, at Leominster, Kington, Church Stretton, Malvern and Ludlow. They included extensive displays of traditional apple varieties garnered from members' orchards, including his own.

As the scope of work increased it was decided that a formally constituted group should be set up, first as a Company Limited by Guarantee in 1999, and three years later registered as a Charity. Tom was much in the driving seat for these formalities, becoming a Director/Trustee, its Treasurer and Company Secretary. Until 2014, Ashford Carbonel Mill was the registered address of MAN. In these roles he quietly and discreetly ensured that the legal bits ran smoothly. He was keen that MAN should acquire and develop orchards of its own. The gift of money from Margaret Gill for buying Paramor gave him great pleasure. It would enable MAN to cement its legacy. He always gave a steady hand at our AGMs.

Over the years he attended many shows. Tom delighted in showing folk features of apples, then watching their faces light up with understanding and pleasure: Jackie Denman, our Chair of Trustees, has recalled "I have very fond memories of Tom going back many years, as do others involved with the Big Apple where his presence was always welcome. My special memory of him is cutting open Ten Commandments to reveal the secret hidden inside (the ten red spots around the core) to anyone who happened to be passing, but especially my own small children. We now have a Ten Commandments planted in Putley churchyard, which will always make me think of Tom.

Ros McGregor has added "We met him in the early 1990s with John Lloyd when we had just moved to Shropshire; I think it was at the very first Church Stretton Apple Day. He told us off for presenting an apple for ID from a diseased tree ! [a real no-no, it makes identification next to impossible.] I do remember what a great showman he was — especially when wearing one of those special ties, wielding an apple peeler and demonstrating its use to the public- and he particularly excelled himself when there were children present. MAN gained a lot from his salesmanship talents."

Sheila Leitch, our Network Coordinator, recalls his regular help at the Talgarth August Bank Holiday Festival held in the always draughty Cattle Market. Bringing a few early eating apples for sale and setting up a demonstration apple peeler, his sharp eye would spot a family wandering about when he would immediately become a market stall hustler, peeling an apple and inviting a child to eat the long peel and turn the handle on the next one, with

immediate sale to the parent, urged on by an enthusiastic child. The day a gust blew down the roll-up MAN banner separating us from the stall behind, housing a donkey, which instantly reached through the rails, snatched an apple and knocked Tom's coffee over, was the only time his good humour temporarily faltered.

Tom was indefatigable in his attendance at shows, going to several each year including the Beekeeper's Convention at Builth Wells, to Harper Adams, Malvern, Big Apple, etc. He was always engaging with the public, identifying apples, helping them and encouraging them to buy interesting books and those Apple Peelers. Another pleasure he took was visiting the Trumpet Ploughing Match regularly with Andy Pillow, who has succeeded him as Treasurer. He took huge pleasure being with children, and was thrilled to plant a tree, a family apple tree, with three different Welsh varieties, at Knighton primary school in Spring 2013. His picture recorded in the Hereford Times shows that delight.

To mark our 21st Anniversary, the public were invited to visit to his orchard when it was in full blossom, what a happy day that was....

Diggory Kempton

"Diggory went to an exhibition of apples in the Royal Horticultural Halls in Chelsea in the 1980s," recals his wife, " and was impressed. He decided to plant a few trees in his garden in Highbury, and they did well. There was only room for cordons, and in the London air he never had any problems with pests or diseases.

I think he first discovered MAN in about 1994. We went to an Apple Fair in Church Stretton about then — the first there had been, I think. We would have met Tom there, and John Lloyd as they were doing the ID together. We had moved to Shropshire in October 1993, and growing apples was high on Diggory's list of things which he wanted to do. Much of our land had recently been planted with woodland trees, and he put fruit trees in wherever there was a space, and also created orchard areas. We eventually had about 40 trees. Some were mistakes which had to be removed, and during our 25 years there we noticed most of the common pests and diseases. As we were registered as organic, we managed any problems with minimal intervention and eventually all the trees which did well found their own balance with canker, codling moth, etc. — and it didn't seem to matter much.

Diggory's interest in apple growing was never academic or theoretical; he was concerned with what worked for our orchard. He had a natural intuitive sense of what each tree needed, when to leave well alone, and where and when to prune to allow light and space. He enjoyed growing different varieties, exploring their different characteristics, and the poetry and history of their names, but had little interest in scientific analysis or genetics. He continued to manage the trees for as long as he physically could. For some time he was involved in the Shropshire Hills work: his role was to visit applicants who had applied for grants — EEC money, I think — for planting traditional orchards, and created orchard plans with comments on the likelihood of success.

I think he was MAN's membership secretary for about ten years, and took on the task, with James Bailey, of putting all the names on computer. Committee meetings tended to be a fair distance away, and I don't think Dig thought he had much to contribute. He was never interested in learning ID skills. We must had stuffed thousands of envelopes at Newsletter times, and he also had the job of sending out books & CDs."

We are sure that all members who knew them will recall Diggory and Tom with great respect and affection. We wish to thank them both for their guidance, loyal and hard work and for their generous remembrance of MAN by legacies and gifts.

Apples that keep

Here in the Three Counties of Herefordshire, Gloucestershire and Worcestershire, come October, often you cannot give apples away..... literally no one wants them. There are apples everywhere, gluts and waste galore. Come January it is a slightly different matter, even many of those with their own trees have long since used up and run out of fresh apples. So extending the season is a matter of varietal selection.

Delbartardive - I obtained this tree from an end-of-season sale in 2013, having never heard of it so bought purely on the description. But it has proved to be one of the best keepers I grow. My kids will still eat them in February with no moans about it's shrivelled, softness.

Winter Banana - this US variety is a stunning looking apple in early Autumn with a glorious pink blush that keeps well into February.

Granny Smith - the 'ole supermarket favourite that has now largely slipped from favour, replaced by Gala. But in keeping terms it is perhaps one of the longest. Whilst not the tastiest apple, it is a good coleslaw apple and worth having one in an orchard or collection for this keeping ability.

Tupstones - a local variety from Worcestershire, will keep til Easter and beyond. It has a slightly nutty flavour and a dry flesh, and the fruit will hang on the tree in some years into early February.

Belle de Boskoop - Dutch in origin, probably best used as a culinary when it comes to keeping.

A few great keepers will seriously extend the season, enabling you to eat your own apples up to Easter. Although today we can eat a Gala every day of the year, this disguises the fact that apples were in the past a seasonal crop. From Gladstone and Beauty of Bath in late July and early August through to the last keepers around Easter when there would have no apples again until late Summer. A trend we tend to follow in our house in our apple growing.

Wade Muggleton

MAN Accounts

Statement of Financial Activities for the year ended 31st March 2019

	Unrestricted Funds £	Restricted Funds £	Total 2019 £	Total 2018 £
Incoming Resources				
Annual Subscriptions	1,449	-	1,449	1,284
Apple ID	952	-	952	1,517
Green Bank Interest	34	-	34	15
Donations	10,762	-	10,762	11,043
Life Members	500	-	500	380
Misc. Receipts	4,272	-	4,272	3,482
Pomona Project	15	-	15	85
Speaker Fees	-	-	0	35
Grants Received	-	-	0	-
Events	-	-	0	495
Sale of Books & CD's	1,169	-	1,169	2,063
Sale of Trees	-	-	0	0
Peelers	155	-	155	0
Grafting/Pruning Courses	-	-	0	240
Juice Sale	-	-	-	-
Closing Stock	8,462	-	8,462	7,798
Total Incoming Resources	27,770	0	27,770	28,437
Resources Expended				
Direct Charitable Expenditure:				
Running and maintenance costs	28,582	0	28,582	18,333
Opening Stock	7,798	0	7,798	9,112
Total Resources Expended	36,380	0	36,380	27,445
Net Incoming Resources	(8,610)	0	(8,610)	992
Fund balances b'fwd at 31st March 2018	73,653	0	73,653	72,661
Fund balances c'fwd at 31st March 2019	65,043	0	65,043	73,653

Balance Sheet as at 31st March 2019

	As at 31/03/2019 £	£	As at 31/03/2018 £	£
Fixed assets held for Charity Use				
Land & Improvements	36,000		36,000	
Orchard Equipment	1,534		1,705	
Computers	83		111	
Library, Reference Books & Equipment	3,000		3,000	
		40,617		40,816
Current Assets				
Debtors	-		432	
Bank Balances	20,420		32,405	
Stock held for Resale	8,462		7,798	
		28,882		40,635
Less Current Liabilities				
Creditors	4,456		7,798	
		24,426		32,837
NET ASSETS		65,043		73,653

Major apple events

*= Apple display and MAN ID service.

Sunday 8th September. Frampton-on-severn Country Fair. www.framptoncountryair.co.uk.

Friday–Sunday, 13–15th September. Ludlow Marches Food and Drink Festival. Always a good selection of local cider makers and fruit juicers in attendance. http://www.foodfestival.co.uk

Saturday 21st September. 14:30–17.00, Perry Pear ID at Hartpury Orchard Centre, Hartpury Orchard Centre, Blackwells End, Hartpury, Gloucestershire GL19 3DB. The National Collection of Perry Pears – over 70 varieties on display (crops permitting!), Teas,. Explore the Wildlife Wetland and bring your perry pear for identification. There will also be the opportunity for any aspiring perry, cider or juicers to discuss the opportunities to use or hiring equipment from the Centre. https://www.hartpuryheritage.org.uk/our-initiatives/the-national-perry-pear-centre/background/. Perry Pear ID at Hartpury Orchard Centre. £2 per variety, bring at least 8 + a few leaves, all in good condition! https://glosorchards.org/home/events/category/allevents/

Saturday 21st September. An 'Orchard Day' at the |Community Orchard, Llandeilo.Contact: Phillip James at philjames@gmail,com, 01558 685746.

Weekly ID workshop at the Harp Inn, Glasbury (tentetively) MAN ID Session from Thursday 27th September, from 10:15..

Saturday/Sunday, 29/30th September. Autumn Show at Three Counties Showground, Malvern. Perry pear ID available but please note that MAN will not be attending this year. If you have apples for Identification these can be sent to us or handed in at the Big Apple or Gloucestershire Orchard Trust stands. Do please note our guidelines and fee for submitting each variety, see http://www.marcherapple.net/research/identification/

*Saturday, 5th October. Applefest. Tenbury Wells, held on the town's Burgage Recreational Area, from 10:00–17:00, Further details: www.tenburyapplefest.co,uk

Daily throughout October 10:00-15:00 at Berrington Hall, the National Trust property near Leominster invites you to join the celebration of the harvest with a full month of traditional apple themed activities. With a children's trail, apple themed treats in the tea-room, crafts and apple pressing on selected weekends, Berrington has a lot to offer. Also on Saturday 5 and Sunday 6 October there will be traditional horse and carriage rides to get you into the swing of the season. MAN hopes to attend on sunday, 6th Oct and offer an ID serice. https://www.nationaltrust.org.uk/events/5f62deb6-143e-4765-875d-a346462653de/pages/details

Saturday 12th October. Apple Day at The Green Wood Centre, Coalbrookdale near Telford, from 10:00–17:00 http://www.shropshireappletrust.co.uk/appleday.php Apple pressing using the large community apple press, fresh juice for sale; hog roast, live music, apple display and apple trees for sale, cider bar, WI stalls, craft demonstrations and hands-on opportunities to practise polelathing, pottery, etc. Contact: 01952-433594 or 433880

*Saturday–Sunday, 12-13th October.'**THE BIG APPLE**'. Weekend rural events in and around Much Marcle http://www.bigapple.org.uk/ . £2 entry to historic grounds of Hellens, from 11:00–16:45 where there will be apple and pear displays, ID services and tastings of a selection of cooking apples. Further details of talks, demonstrations and other events, from Jackie Denman, Tel. 01531–670544.

Friday 18th October, National Apple Day http://commonground.org.uk/projects/orchards/apple-day/

plus

Apple Day celebrations at the Cider Museum, Hereford on Apple Day, details to follow https://www.cidermuseum.co.uk/events-exhibitions/

*Saturday, 19th October. Leominster Apple Fair at The Priory, Leominster. 10:00–16:00. Parking nearby in Bridge Street Car Park. Various stalls, apple display and ID by MAN. Details from Felicity Norman, Tel. 01568–780886.

Saturday and Sunday 19th–20th October, National Botanic Garden for Wales, Llanarthne, SA32 8HN, 10:00 - 18:00, Apple Weekend https://botanicgarden.wales/visit/whatson/. Paul David attends every year with a display of his apples and also brings pot grown trees along for purchase.

*Saturday, 19th October, Shropshire Hills Discovery Centre, School Road, Craven Arms, SY7 9RS. MAN will be thre for ID.

Saturday 19th October. Apple Day at Gloucester Life Museum, 11am–4pm. www.citymuseume.co.uk

*Sunday, 27th October. Chepstow Apple Day, organized by Chepstow Town Council at the Drill Hall, Chepstow. Admission free. 11:00—16:00. MAN Apple display, apple juice, cider and perry tasting.

*Tuesday 29th October, Acton Scott Historic Working Farm, Wenlock Edge, Acton Scott, Church Stretton, SY6 6QN. MAN will be thre for ID.

Saturday 17th November.

MAN AGM

at 11:00 in the Cider Museum, Pomona Place, Hereford HR4 0EF.

Guest speaker : Helen Woodman will tell of her enthusiasm for apples andpears, wildlife, cider and perry.

Available from the Marcher Apple Network

Welsh Marches Pomona is written by Mike Porter and illustrated by Margaret Gill. It contains beautifully illustrated descriptions of 31 varieties of local apples, some of which have never featured in the apple literature. Life-size views of ripe fruit and blossom at both pink bud and fully open stages, plus line drawings of leaves and sections of fruit make this a truly unique reference work.
Hardback format, 300mm × 230mm; full colour throughout. 96 pp.
Price £15.00 + £5.00 p and p.

Apples of the Welsh Marches describes 54 old varieties of apples cultivated in the traditional orchards of the region, plus 24 further varieties grown here extensively in the past and still found in local farm orchards.
Price £5.00 + p and p.

The Worcestr Black Pear written by Wade Muggleton is an in-depth story of this iconic fruit, so embedded in Worcesterhshire life. Here is its story.including up to date DNA reearch.
Price: £8.00 + p and p.

Back Numbers of the *MAN* Newsletter
Many of the articles featured contain advice and ideas which have stood the test of time and still make an interesting read. Copies of previous issues are now available as PDFs — see web site for order form with full details of prices.

The Parmor Orchard Cymdu, an illustrated flora, 2014, includes the history of the acquisition of the orchard. With detailed , botanically accurate black & white illustrations which could be coloured in by children. The original black & white drawings by Dr Margaret A V Gill, have been deposited in the National Museum of Wales, Cardiff.
Price £3 + p and p..

To Order all items: Preferably download an order form from www,marcherapple.net/books.htm — note that *MAN* now has a PayPal account — or write to Membership Secretary, Marcher Apple Network, 25 Grange Road, Shrewsbury, Shropshire S&3 9DG. Cheques should be made payable to Marcher Apple Network.

The Apples & Orchards of Worcestershire by Wade Muggleton This book capture a few of the stories of the apples of a county once so renowned for its orchards.
With 32 varieties described and photographed, as well as chapters on lost varieties, heritage varieties, Pears, Orchard stories and aftercare the book will be available at all events that MAN attend as well at www.marcherapple.net/shop all proceeds from the sale go to Marcher Apple Network
Price £8.50 + p and p.

MAN Library contains over a 100 books and major articles on fruit, principally apples. Members may arrange to borrow these, and the public by specific arrangement (donations are welcome). A library listing is given in http://www.marcherapple.net/libr.htm When new website is launched there will be a new address. For more information contact secretary@marcherapple.net

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