Spring 2017
Issue 1

Orchards East

(incorporating Suffolk Traditional Orchards Group)

Newsletter

Ambitious 6-county Orchards Project Hits 'Go'!

ORCHARDS EAST is an exciting new project now rolling out across the whole of East Anglia. The Landscape Group in the School of History at the University of East Anglia has been awarded £477,700 by the National Lottery for a three year project looking at our regions' orchards.

The project builds on the work of their partner organisation, Suffolk Traditional Orchards Group (STOG), using similar methodology to survey orchards and improving our understanding of traditional orchard management and history.

The English landscape has been described as the richest historical record we possess. Orchards are an integral part of this landscape, but have been relatively poorly researched; they are important for landscape and biodiversity as well as being a rich resource for local communities.

Working across Bedfordshire, Cambridge, Essex, Hertfordshire, Norfolk and Suffolk, the project will recruit and train members of the community to survey local orchards. They, and other volunteers, will receive training in traditional orchard management – helping to halt the decline of these vital skills.

Head of the Landscape Group, Professor Tom Williamson says: "I am delighted that we have been awarded this National Lottery grant. Orchards are an important heritage resource, both in terms of biodiversity and as key features in our historic landscape."

The project has two principal components. The first is mapping the historic orchard sites from the 2nd Ed OS maps of the early 20th C and recruiting volunteers to visit as many of these sites as possible. If the orchards still exist, the volunteers will survey them and, in selected cases, will investigate their wildlife, crop varieties and historic origins.

Orchards East works in 6 counties in the east of England. Courtesy of www.picturesofengland.com

In addition to STOG, many local and regional organizations are already associated with the project, including county orchard groups such as East of England Apples and Orchards Project (EEAOP), Bedford and Luton Orchard Group (BLOG), Cambridgeshire Orchard Group (COG), Hertfordshire Orchard Initiative and the county Wildlife Trusts.

heritage lottery fund
LOTTERY FUNDED

University of East Anglia

Inside this issue:

Paul Read helping a Suffolk landowner to survey her orchard

Most important to the project are the six local environmental record centres, LERCs, who have already started to map historic orchard sites to generate local maps for Orchards East's volunteer surveyors. These are Bedfordshire and Luton Biodiversity Recording and Monitoring Centre (BLBRMC), Cambridgeshire and Peterborough Environmental Records Centre (CPERC), Essex Wildlife Trust Biological Records Centre, Hertfordshire Environmental Records Centre (HERC), Norfolk Biodiversity Information Service (NBIS) and Suffolk Biodiversity Information Service (SBIS).

The second component of the project is to raise our understanding and appreciation of orchards, and, in particular, those of the traditional form. This means trees on vigorous rootstocks in natural or semi-natural vegetation (including lawns!). The project will run workshops for a wide audience across the region on different aspects of orchards including planting, management and restoration as wildlife habitat, crop production and crop use, tree propagation and fruit and nut identification.

As the project continues we expect many individuals and local groups to be involved, especially volunteer surveyors, parishes and their community orchards, the Wildlife Trusts (some of which already own traditional orchards), local authorities, garden associations, and, indeed, anyone with an interest in fruit or historic landscape.

Several regional and national organizations will play important roles in the Orchards East Project:

- Natural England (NE) who define and administer the concept of UK Priority Habitats.
- The Peoples Trust for Endangered Species, who are commissioned by NE to collate and manage a national inventory of Traditional Orchards in England,.
- The East of England Apples and Orchards Project (EEAOP), who amongst many other activities sell fruit trees for gardens, run courses and operate fruit identification at Apple Days in the region. EEAOP are the legacy organisation who will take the project forward after the 3-year HLF funding.
- Fruitid, the website www.fruitid.com that provides descriptions, historic documentation and imagery of fruit cultivars
- National Fruit Collection and their scientific curator at the School of Agriculture, Policy and Development - University of Reading.
- Greener Growth CIC, that designs, plants and manages traditional orchards in prisons, schools, and for councils, institutions and organizations across the region.

In addition, there are many local orchard groups and others across the region managing sites varying from small allotments with just a handful of trees, to village community orchards, large country house orchards, nationally important and historic sites and AONB sites. There is a huge range of organizations which can become involved in this innovative and inclusive project.

Ancient Tree Forum and STOG visit to Rummers Lane Orchard, Cambridgeshire

For further information and to find out how to get involved, contact :
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The OE website is under design, please watch this space!

Transfer of STOG newsletter to Orchards East for 3 years

This Newsletter is a development from the Suffolk Traditional Orchard Group newsletter of the past 5 years and its initial core distribution is the same too. The Orchards East project will run for three years and, during that time. the two newsletters will be incorporated into one joint issue. The distribution has already been extended to include many new recipient addresses from across the region and this is expected to continue to increase.

STOG has been significant in the introduction of Orchards East and we believe that its members will find the content in the next three years to be of increased interest. Currently the distribution is about 500 and we expect this to increase significantly.

Gen Broad, STOG Manager

Paul Read, STOG Chairman

ORCHARDS EAST's Inaugural Conference
10.00 am – 3.30pm

Sat 8st July, Horringer Community Centre, The Street, Horringer, Bury St Edmunds, Suffolk IP29 5RU

Doors open at 9:30am. Presentations from 10:00am

The day will be a series of presentations with time before, after and at breaks, to talk, look at stands and displays, and maybe taste something fruity. These will include Hertfordshire Orchard Initiative, Peoples' Trust for Endangered Species, a demonstration of www.fuitid.com, and posters and displays from Suffolk Traditional Orchard Group.

PRESENTATIONS WILL INCLUDE:

"*Orchards; what they are, where they come from, what Orchards East hopes to achieve"* **Paul Read**

"*Historical questions – what we want to know about orchards in the past*" **Tom Williamson**

"*Orchards and diversification in late 19th century Essex*" **Neil Wiffen**

"*Social history of orchards in the 19th century*" **Joanna Crosby**

"*Identifying fruit cultivars: traditional methods, fruitid and DNA finger printing*" **Peter Laws**

"*Orchard biodiversity: pests or wildlife*?" **Paul Read**

"*Orchards East's activities and how to be involved"* **Gen Broad**

Directions

Horringer Community Centre is situated near the church, with direct access (signposted) off the A143. Parking is somewhat limited and we advise that where possible cars should be shared.

We will provide teas and coffee but suggest you bring your own refreshments and lunch.

If you would like to come along, please book a place by contacting Gen Broad at gen.broad@suffolk.gov.uk

STOG's (and OE's) TREE BUYING SCHEME

STOG has operated a Buying Scheme for orchard trees for a number of years. It is similar to an allotment club's seed buying scheme; discounted seeds bought in bulk for onward sale to their members. STOG commissions the purchase of trees on rootstocks that are required specifically for traditional orchard plantings which are sold on with a 10% mark-up passed to STOG as a donation.

The scheme originated to provide trees for two very specific purposes.

Higher Level Stewardship (for farm and other land holdings) funded Traditional Orchard plantings and required trees grafted onto specified 'traditional' vigorous rootstocks. At that time (in 2005) no nursery in eastern England could supply apple and pears on these stocks.

A second need was by local organizations planting 'scattered' orchards in any suitable spaces they could find and this required large growing trees, that could hold their own in natural vegetation and the open countryside. STOG's volunteer grafters already grafted trees for this need, but the supply was somewhat variable and larger professionally grown trees were more reliable in difficult sites.

Five orchard trees being planted at Suffolk Agricultural Association's Trinity Park. Picture courtesy of EADT.

STOG and its members, who already had accounts with nurseries for rootstock purchase, negotiated rates with specialist nurseries across England, and the STOG Buying Scheme was born. Today the annual scheme mostly provides bare root trees, but also trees sold primarily in containers such as walnut, cobnuts and mulberries. It has spread well beyond Suffolk into Essex, Norfolk and Cambridgeshire, supplying community groups, parish, district and county councils, parks departments, Areas of Outstanding Natural Beauty (AONBs), Wildlife Trusts, as well as farms and other landowners in Countryside Stewardship.

One of the sites planted though the STOG Scheme last winter was in the Suffolk Agricultural Association's (SAA) Trinity Park, Ipswich. The trees planted were: Apples - Lady Henniker, St Edmund's Russet, Laxton's Superb; Damsons - Cluster and Shropshire Prune. While five trees do make an orchard (just), SAA hopes to extend the planting.
[To read the story visit the East Anglian Daily Times website >]

Suffolk Show at Trinity Park 2nd June this year. The five trees can be seen in a picnic site near the wildlife area, close to Suffolk Wildlife Trust's stand.

A delivery from one of our suppliers, Frank P Matthews Ltd of Tenbury Wells, in January.

Case Study of a Buying Scheme Delivery

40 uncut trees are despatched overnight in an open topped crate, the lower plastic film round the bare roots partially removed.

These trees can be up to 2.4m (8ft) and will be healed into rabbit-free open ground prior to planting out.

In this case, these are mostly apples on M25 and pears on Kirchensaller. They can be pruned to become whatever form is required: standard trees with 2m or more of clear trunk, or to create the wide-spreading trees branching at less than 1m (3ft). This is the typical form of the large 19th C fenland orchard trees, or, as some pears were treated in East Anglia, into a pollard.

A great benefit is that large trees in their uncut state can be delivered from the grower directly to the purchaser.

Obviously there some risks with any transaction of this sort and so formal rules exist for everyone's financial security. It is planned that the Scheme be extended across the counties of Orchards East, and more details of this will be in our Newsletter later this year.

and now for something completely different .....FRITTERS!

Paul Read

My maternal grandmother, Harriet Whitehouse, made apple fritters a lot during WW2 and the post-war rationing period. She also made exploding nettle beer, and risked her life, and mine, eating a wide range of fungi from Barn Hill and Hampstead Heath. This may have been the reason why I became a botanist - to reduce the risk of being poisoned by being able to identify the contents of her frying pan!

As a result I have strong views on apple fritters.

They must be round slices of a pealed and cored apple; crisp and crunchy on the outside, and the apple should be firm-ish, and not a runny puree on the inside...and the apple should be sweet (probably that last a reminder that my first fritters were eaten without sugar!)

Monica Askay, of course, also takes a historic view of fritters! See overleaf...

APPLE FRITTERS

Apple fritters in this country have a long history. A recipe appears in Harleian Manuscript 4016, dating from around 1450. In this recipe the fritters are dipped in a batter of egg yolks, flour, yeast and ale. The cooked fritters are then strewn with sugar before serving. In The National Trust Book of Historical Recipes, Sara Paston-William's version of this suggests using dry cider instead of ale and yeast.

Predating this, however, is a recipe in Forme of Cury, a manuscript from the Court of Richard II, and dating from around 1390. This is a very interesting recipe entitled "Frytour of pasternakes (parsnips), or skirwittes (skirrets, another root vegetable), and of apples". I find this recipe particularly interesting as I often pair apples (and pears) with root vegetables in a range of savoury dishes. The batter used in this recipe is made of eggs, flour, ale, zest (I'm assuming our modern usage of the word and lemon zest, although it could be a slip of the pen and have meant to read "yeast"!), saffron and salt. These fritters are served with almond milk. Almond milk has recently become available again. During the medieval period, almond milk was a common ingredient often used as a thickener, and as a substitute for dairy products during such periods as Lent when they were forbidden by the Church. The Church greatly influenced our diet during that period.

What are the best types of apples to use when making fritters?

An apple which collapses when cooked, such as Bramley's Seedling or a Codlin (such Grenadier, Emneth Early, Keswick Codling or Lord Suffield), would NOT be suitable. As well as choosing varieties which hold their shape, I prefer to use varieties that have an interesting flavour with some acidity. I would suggest trying Blenheim Orange, Ashmead's Kernal, Ribston Pippin, Holstein, Orleans Reinette or a Cox's Orange Pippin. Do experiment with the varieties you grow or have access to.

Although a sweet Apple Fritter strewn with caster sugar and ground cinnamon is very enjoyable, a mix of root vegetable and apple fritters would make an excellent accompaniment to sausages or roast pork. (I recall sweetcorn fritters served as part of Maryland Chicken, popular in the late 1960s).

Monica Askay
November 2016

Paul continues*: I think my grandmother used large sweet apples and as we had a Blenheim Orange tree I think she used that. Today, I think one of the best apple for fritters is a large Suntan, and as we eat Suntan from November to March it makes for a long apple fritter season! And served with sausage! Second best is Lady Henniker (but don't cook too long).*

Apple Blenheim Orange (courtesy of Keepers Nursery)

Lady Henniker apple

DNA FINGERPRINTING SUFFOLK FRUIT IN 2016

In 2016 Peter Laws of Fruitid (see www.fruitid.com) made an arrangement with the company NIAB EMR to commission ***DNA Fingerprinting*** of apple and pear samples sent in by local orchard groups and others. The company was originally set up as the Kent fruit industry research station East Malling Research and is now an arm of NIAB.

Normally an expensive service for small organizations to afford, EMR would carry out the work in large batches grouping together all the analysis work. DNA fingerprinting requires the comparison of data from the unknown samples with data from known samples of varieties in order to find a match. This data in the UK comes principally from the National Fruit Collection at Brogdales in Kent curated by the School of Agriculture in Reading University, so the interpretation of the data involves both organizations. For more information, see The National Fruit Collection >

STOG sent in a number of apple and pear samples (leaves are used for this) in May 2016 from trees in Suffolk that either had never been identified, or where there are grounds for doubting previous identifications. In most cases this is when the fruit does not appear to fit any cultivar known to us; that may be because we don't have a description that fits, and maybe just because we haven't looked at the right sources of information with any cultivar known to us.

In the case of apples there is a database of over 2,200 apples grown in the National Fruit Collection (NFC) whose DNA has been previously analysed, and so can provide a source of possible matches. Of course, across the world, there are many thousands more varieties that have not been analysed, or have been analysed using a different set of criteria. But that is another story, for another newsletter!

It had been intended that EMR would also DNA fingerprint cherries but although we sent sample leaves, Reading University decided that the analytical method needed some improvements and so these samples (almost all from a range of trees all called Polstead Black) are still in the freezer store at EMR and may be analysed next year. Once the data from the DNA fingerprinting is ready the process of matching it to any possible known variety is carried out by the NFC curator at the University of Reading.

Several of the apple samples we sent in were found to be "unique". This term means that there was no match. In the strictest sense they may not be truly unique, it is simply that no other apple in the NFCs database matches it.

Information from the DNA fingerprinting of the 2016 STOG samples is still being followed up and will be published after some more investigation.

Meanwhile this is what we know about one of those apple leaf samples we sent in.

THE APPLE ON THE BEACH

The apple on the beach at Thorpeness is often known just as 'Thorpeness', but also as 'Roger Deakin's Apple', as it was recorded in his last book "Wild Wood".

Now about 12m in diameter, kept to only a few feet high by the salt winds, its branches stretch out along the grounda and is occasionally encroached by shingle. It is well known and regularly scrumped in August for its nice early fruit.

It has been on the landward side of the shingle bank for a very long time. Local people suggest at least since the 1940's but it is difficult to separate guess work, truth and myth. Recently recorded by the Ancient Tree Hunt it could be very old indeed.

It was widely thought locally to have been the last tree of an orchard buried by shingle, which it is not, but is almost certainly a seedling, possible from a visitor's core!

Gerald Fayers, East Anglian apple collector, stands by "the tree on the beach".

Thorpeness Apple in flower

'Roger Deakin's Apple' has been propagated by STOG for some years, and we have distributed trees under the name **Thorpeness** as grafted versions on M25 for over 10 years.

Several local orchards and all the Suffolk collection orchards have the variety, at Sutton, Dunwich, Debenham, Shingle Street and several in the scattered orchard project at Waldringfield, Newbourne and Hemley. For some years it has also been grafted onto MM106 and sold by Botanica Nursery of Campsea Ashe, but under the name of **Aldeburgh Beach Apple**. Without the sea spray that kills of the tops of the young growth it makes a substantial tree.

Leaves were sent in for DNA fingerprinting at EMR in May 2016, not from the tree on the beach – the leaves were already ragged and damaged, but leaves from a 6 year old tree propagated from the beach tree at Home Farm, Thrandeston. This produces fruit that matches the Thorpeness tree, to confirm identification.

The DNA fingerprinting result was unexpected. A matching tree exists in the National Fruit Collection! not in the main collection but in a range of "unknowns", apples sent in to the staff to identify, but which remained unknown.

A note in the archive called it a "beach seedling", and in the files state the apple was sent in by Richard Heseltine of Willow Farm Assington in 1984. The staff requested some graft wood which was sent and from which two trees were propagated. They are still there!

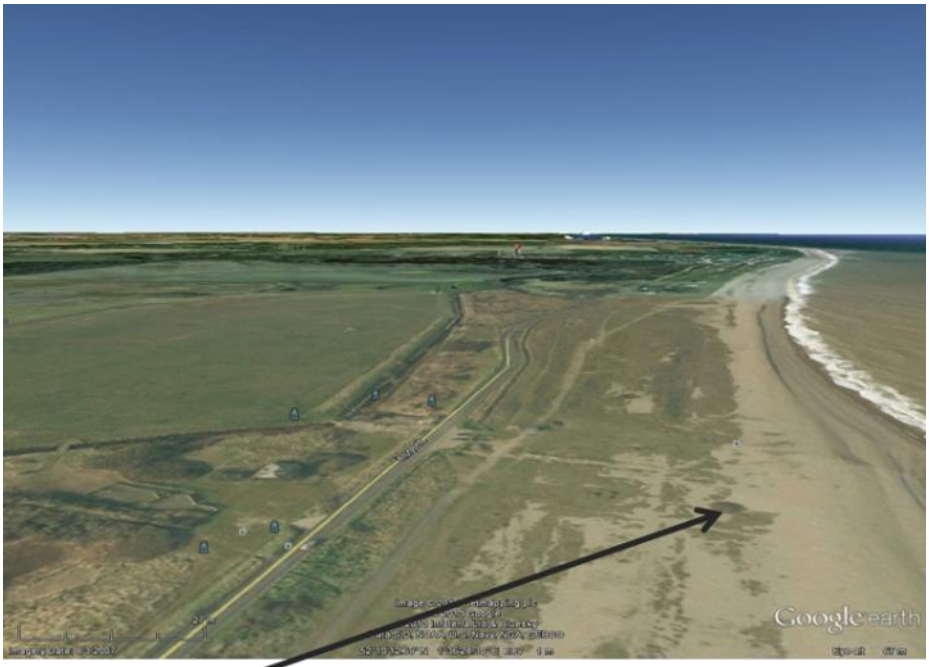
A few years later the NFC staff wrote to Mr Heseltine and asked if he would like some graftwood for *him* to graft. Apparently he said yes and was sent graft wood. There was no more correspondence after that.

The "tree" is about 50m from the high tide level. Village of Thorpeness in the distance.

Armed with this information it was easy to locate Willow Farm, Assington, then and now a fruit farm, but we discovered that Richard had died in 2012. I contacted his son, Chris, who ran the fruit farm for many years and now lives in Aldeburgh. He knew the apple on the beach (so do most local people!) and had known it from childhood, but wasn't aware his father had sent fruit and graftwood to the NFC. I asked if he thought there might be any old trees from that period still on the land, that might have been grafted from the NFCs wood, but he thinks not.

We know no more of its history, but we would really like know when it was first noticed.

It needs a formal name, and this will not be easy. We think most people call it just 'the apple on the beach'; local people who have grafted it certainly called it **Thorpeness**, the nearest village, and we have circulated it under that name for a decade or more. Many more people know it as **Roger Deakin's Apple** from reading his book; although many have searched, but few have been able to find it!. Botanica Nursery call it **Aldeburgh Beach Apple**, and a local wag told us it was the **Tree-in-the-sea** (a nod to the House in the Clouds visible from the "tree"). The National Fruit Collection call it 'unknown beach seedling', but there are many seeding apple trees on and near beaches in Suffolk, notably around Minsmere. Many apple varieties have synonyms. So going with the local flow we think it ought to be called **THORPENESS** synonyms **Roger Deakin's Apple, Aldeburgh Beach Apple**, (and if we really must... **Tree-in-the-sea**).



Location of Apple Thorpeness

Pear Rust

Rusts are a group of very interesting fungi; many form fruiting bodies on leaves and stems of trees and plants, including grasses, and some species are serious cereal crop pests. Pear rust has been in England since the 1930's but rarely after that until the 1990's, resulting in an idea that its increase may be climate change related. So far it has not been a serious problem for pear growers, rarely, if ever, killing pear trees, but more serious for gardeners growing junipers!

Pear Rust is scientifically known as *Gymnosporangium sabinae* and on pears it forms orange spots on leaves with small tooth-like projections. These projections produce spores, held below the spot, on the leaf underside, and occasionally occur as 5mm tooth-like projections on pear fruit. In rare cases every leaf on the tree can be affected – and next year doesn't appear at all! We had exactly that in 2015 at Home Farm on a young Durondeau pear tree. It is exactly the sort of distressing effect that sends emails to gardening websites demanding to know whether the tree should be destroyed or the sprayed with something noxious to kill it.

The realty is interesting and illuminating. The reason we may not have seen Pear Rust before, or since, is because the fungus must re-infect the tree every year, we don't have any juniper trees nearby (and our sheep usually eat the leaves as they fall off the trees!).

Fungal rusts need a living plant host at all times in order to survive, so their life-cycles usually require two alternating host plants. Its main host, that support the fungus perennially, from year to year, is a species of Juniper, *Juniperus sabina,* a non-native, but quite common garden plant here, a native of southern Europe and central Asia... and found in close proximity to wild pears!

The fruiting bodies on juniper are plate-like or shapeless yellow fruiting bodies on both main trunk wood and small twigs. It may be all over the juniper bush and can kill it, but is often barely noticed. They produce mases of spores which need to infect leaves of pear species to survive, producing orange spots and the small tooth-like fruiting bodies that release the spores that re-infect *Juniperus sabina.* The infected pear leaves drop off and die, and in England the pear leaf stage of the fungus dies with the leaf, and its spores do not re-infect the pear. Thus a pear tree needs to be re-infected every year from a Juniper.

There have been some reports that pear rust can infect pear tree wood and some cankerous growth has been attributed to pear rust, but has not been confirmed.

We are carrying this article now because Meg Miller in Gislingham had large fungal growths this April on her Juniper bush and it was identified by Suffolk County Fungi Recorder, Neil Mahler, as *Gymnosporangium sabinae,* Pear Rust. Nearby is a large old pear tree, that does indeed suffer from orange leaf spots, and it is re-infected from the Juniper every year. Meg has taken pictures of her juniper and they show large fungal bodies; more usually they are small irregular or shapeless bright yellow growths on twigs.

Rusts are members of the fungal order Uredinales, and many species have part of their life cycles unrecognized on fruit trees in orchards. Plums alone are part of the life cycle for over 30 species (one of which ***may*** have Hollyhock as its alternative host). Another *Gymnosporangium* species is found on our British native Juniper (*J. communis*) but its alternate hosts isn't known... and is not pear.

In the USA *Gymnosporangium juniperi-virginianae* produces orange growths on Eastern Red Cedar *(J. virginiana)* and its alternative host is apple tree leaves similarly to pear rust. The recommended treatment there is to remove all Red Cedars within 1 mile!

Thanks to Adrian Baggerley for the picture of pear rust on a pear and Meg Miller for the fruiting bodies on her Juniper. Visit Joan Morgan's Fruit Forum > for more details. This website is a great source of information on all sorts of fruit cultivation issues.

Picture courtesy of Meg Miller

Host no I

Meg Miller's Juniper in April 2017 with Pear Rust fruiting bodies. These grow from the trunk and also from quite small woody twigs. The spores are released in April and May and infect nearby, just emerging, pear leaves.

Picture courtesy of RHS

Picture Roger Umpleby© Worcester Biological Records Office

Picture courtesy of Adrian Baggerley & FruitForum

Host no II

Top left: Pear Rust on upper surface of leaves
Above: Pear Rust on underside of leaves
Left: Pear Rust on fruit (rare) of Pear, *Pyrus communis*

Hartest Scattered Orchard

John kemp

When you look around your village or urban community, I bet you can soon find a few patches of land which could be described as under used. I'm thinking of gaps in hedgerows, areas of verge which are so wide they grow an annual crop of docks and thistles. Maybe you can see a spare patch in the local allotments area.

We certainly found a few in our village of Hartest. And we filled them with apples and plums for the benefit of all.

The idea was given to us following a very successful scheme in the Dedham Vale Area of Outstanding Natural Beauty where 15 communities got together to find spaces for what is called The Scattered Orchard Project.

Hartest Parish Council was approached by Emma Black, Countryside Officer for the Dedham Vale AONB and Stour Valley Project and offered us five traditional fruit tees.

We were delighted to accept and now we have a scattered orchard of our own which will bring benefit to all in years to come. By chance we had already planted a Bramley Apple on the corner of one of the roads leading out of the village back in 2014 and in January this year we planted two plums - a Czar and Purple Pershore and a dessert apple James Grieve along one of the boundary fences of the cemetery and two more apples, Peasgood Nonesuch (cooker) and St Edmunds (dessert) at the entrance to the village's Millennium Wood.

The wood was planted to mark the Millennium back in 2000 and contains wild cherry and lots of hazel nut trees to add to the mix and is now very much coming to maturity.

The idea is two-fold really, to make traditional orchard fruit available to the village residents (and wildlife) and to help preserve some of the declining number of old fashioned varieties we used to enjoy.

It is important that any fruit trees planted should be easily accessible to everyone and the village take a collective responsibility for looking after them.

It's brilliant and we can't wait to pick our first fruit!

Local resident John Kemp in Hartest Scattered Orchard