

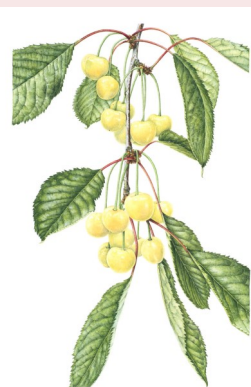
Fruit from the Collections features in London Exhibition

The current exhibition being held at the Garden Museum in London features Tradescant's Orchard a very rare book of paintings of fruit from the reign of Charles 1st, and on show for the first time away from its home in the Bodleian Library at Oxford University. The museum's website says of the exhibition which runs until September:

Tradescant's Orchard: A Celebration of Botanical Art is a contemporary exhibition comprising watercolours by fifty eminent botanical artists is to be staged alongside a display of 'The Tradescants' Orchard', a seventeenth-century volume of sixty-six watercolours depicting fruit varieties that John Tradescant and his son might have grown in their market garden at Lambeth. The artists, invited by The Garden Museum, have selected varieties now considered to be heritage fruits. In the adventurous spirit of the plant-hunting Tradescants, artists from across the globe have embraced the project with works coming from Europe, Korea and USA

One of the botanical artists, Christine Battle, contacted Lorinda Jewsbury, a member of the Horticultural Curation team at Brogdale for information of old cherry varieties and visited Brogdale to paint the Donnisen cherry, an unusual pale cherry also known as White Cherry. Christine told us: "My fellow artist Gillian Barlow and I had so much fun at Brogdale and Lorinda and her colleagues could not have been more helpful or interesting in their breadth of knowledge and enthusiasm. The National Fruit Collections is a fascinating organisation and I must say I was truly amazed at the number and variety of fruits you grow."

Reproduced with permission, here is the painting by Christine.



News from Brogdale Collections

Brogdale Collections are in the midst of the fundraising Festival activities for the year, after successful Easter, Hanami and Strawberry events, the focus moves onto:-

- Cherry Fair - Sunday 16th July
- Plum Day - Sunday 13th August
- The ever popular Cider Festival - 26th and 27th August
- Pear Day - Sunday 17th September
- National Apple Day - 14th and 15th October

where we welcome visitors to the collections to explore and enjoy the days and their unique attractions.

The new weather station is also now fully completed and will be a valuable resource for both



Educational groups and other visitors to the collections and is placed conveniently in the middle of the collections for everyone to see and experience adjacent to the Met Office weather station, and other projects continue to be planned and developed.

Brogdale Fine Fruits

Brogdale Fine Fruits has developed a range of fruit juices, ice-creams, preserves, sauces, cider vinegars and chutneys. ALL made using only the fruit from the orchards and collection at Brogdale Farm - these are available throughout the year.



Our fresh fruit is seasonal, ranging from soft fruit through to plums, nuts and onto apples and pears - not forgetting the oddities like quince and medlars.

To order please call: 01795 533225 or email: Mandy.woodyatt@fastllp.com



Supporter of the National Fruit Collections Trust

2 for 1 Voucher Offer

The offer entitles free entry for one person when accompanying an adult paying the full entry price.

Please present this voucher at the Brogdale Collections office.



*Only original voucher accepted.
Valid until 31st October 2017*



National Fruit Collection

Supporters of the National Fruit Collections Trust
Summer 2017

Collection News

The programme to re-propagate all the tree fruit collections is continuing. The new Pear Collection was planted out in 2008 and then the



apples were re-grafted and planted in 2013-2015. The picture shows rootstocks lined out in a specially prepared nursery area at Brogdale ready for re-propagating the Cherry Collection during this summer. It will probably be another

18 months before the resulting trees can be planted into their new home, so the farm staff will be busy getting the land cultivated. There is always a programme of growing replacement trees when the existing ones succumb to an infection or do not grow well and the right-hand picture shows some of the grafted apples in the Brogdale nursery.



Weather in 2017 and its effects on fruit crops

Flowering time is always a nail-biting period as the effects of the weather are so critical. This year was no exception as the warm dry period through much of April brought the flowering on early and increased the risk of a late frost doing a lot of damage.

Here at Brogdale we had a significant frost of -2.6°C on the 20th April when many of the apples were in flower, and the pears and plums were nearing the end of flowering. In the Collections

there is such a spread of different flowering times and so many varieties giving plenty of pollen that the frost has not significantly affected too many varieties.

But once flowering is over the very small fruitlets are much more susceptible to frost damage and have no way of recovering, so the trees that had fruitlets at this stage have fared worse resulting in quite a few plum and pear varieties having a much reduced crop. Cont....

Weather in 2017 cont...

Across the country other areas have also had frost and many commercial fruit farms will see their crops considerably

down as a result.

In some areas there were 2 or 3 frosts about a week apart, the effects of which were widely publicised in the press for their impact on vineyards. The

team of advisers based at Brogdale who work for FAST (Fruit

Advisory Services Team) have seen orchards where it is difficult to find any apples at all, yet on the same farm in another orchard which may be more sheltered, or just a few feet higher up, there is a normal crop.

Many cherry growers now protect their orchards by growing the trees under polythene covers and this can reduce the effects of frost, but this is not a practical solution for apple growers.

In the period after flowering fruit trees are very sensitive to cool temperatures and poor light levels both of which can lead to fruitlets dropping a few weeks later. We are now seeing the “June drop” beginning and it does appear to be heavier than normal due to the prolonged cool dull spell during May.

Given the spread of flowering we have in the 2,200 apple varieties here at Brogdale we are sure that there will be plenty of fruit to see when you visit and for the displays at the Apple Festival in October.



This picture was taken on the 1st June showing one of the very late flowering varieties in the apple collection

Update on the Climate Change Trial

The final stages of the tunnel construction over the Climate Change Trial are completed and the experiment gets underway



Climate change is rarely out of the news from Mr Trump’s latest disagreements over the Paris Agreement to the causes of this summer’s heatwave. At NFC Brogdale we have something unique to contribute – our climate change trial focussing on apples is the only such trial being attempted in the world. It was concerns about what effects rising temperatures would have on apple production that led to the Climate Change Trial at NFC Brogdale and a timely legacy has provided the funding.

The trees are now well established (bar some losses due to apple canker where replacement trees will be necessary to fill gaps) so the next phase of applying the climate regimes can now be fully implemented. The original plans to cover last year were delayed as it became obvious that the sophisticated control system, for venting the plastic tunnels and for providing the pump power for the irrigation system to give reliable regular treatments for the three regimes, would require a three phase electrical supply and a lot of cutting edge monitoring equipment.

The site is pretty impressive as you approach as these are 5m tall structures covered in clear plastic with sides that can be rolled up as well as vents in the roof to allow the different temperature regimes to be applied. The three bays allow for the possible nine treatments with the same varieties of apples in each bay. An overhead irrigation line for each row of trees will

deliver the rainfall equivalent so that there will be the following treatments:

Temperature – from current predicted climate change scenarios.

Treatment A Ambient temperature, i.e. same as outside the tunnel

Treatment B +2°C

Treatment C +4°C

Rainfall - from current predicted climate change scenarios.

Treatment 1: Ambient rainfall (100%)

Treatment 2: high rainfall [+ 20% (120%)]

Treatment 3: low rainfall [-20% (80%)]

The temperature differences can be delivered by venting or not venting the bays to give an average as close to the target temperatures as possible. The vents will be computer controlled using a monitoring system developed for glasshouse tomato crops. The rainfall will be applied via the irrigation lines by using all the rain water that falls on the roofs of the tunnels. This will be collected via the guttering system and sent to a large holding tank which has been installed on site. The capacity of the holding tank was calculated so that it can cope with 95% of all rain events at Brogdale Farm that have been recorded over the last ten years. Any excess beyond this will just overflow through an outlet pipe.

The University of Reading has secured funding for a PhD student to conduct a three year project to measure the effect of the different climate scenarios on the flowering stages, cropping, yields, fruit quality, etc. of the twenty apple varieties in the trial. It is vital that all the possible data that can be collected from the facility is meticulously carried out and the only way to do this is to have a dedicated scientist carrying out the work. It is often forgotten just how much graft goes into any scientific study that adds to the sum of human knowledge. Data collection is pretty dull and laborious but without it we are just making wild uninformed guesses about what is actually going on.

Statement from the Trustees of Brogdale Collections

It is with regret that we have received the following statement from Brogdale Collections, with whom we had hoped to work towards creating a single supporters’ group

In the Spring Newsletter 2016 we announced the intention for the existing supporters’ group for the NFCT and Brogdale Collections to come together in order to provide a single group which could be the voice for the National Fruit Collection at Brogdale.

It has become apparent to the Trustees of Brogdale Collections that given the widely different aims and objectives of the respective Charities that it is not a practical objective to amalgamate the two groups.

Brogdale Collections sees its role as to encourage public access to the NFC and as a consequence we are reaching out to quite a different demographic to the NFCT. It has also become apparent that there could well be difficulties or confusion with regard to our respective fundraising activities.

2016 was always regarded as a trial period and so it is with regret that we have confirmed that we wish to withdraw from this arrangement and concentrate on developing our own supporters group.

It goes without saying, that in no way diminishes the commitment of BC to continue to work with NFCT to encourage maximum public enjoyment and appreciation of the Collection

Alan Roe, Chair Brogdale Collections

University of Reading PhD student Tobias Lane talks about the aim of his research

“My research is centred on investigating how a changing future climate in the UK may affect the phenology* of apple trees and how this effects yields. The climate change facility at the NFC will allow me to carry out this research, as it is one of the only full scale field trials facilities able to test this. The climate around the trees will be manipulated in line with future climate change scenarios for the UK, focusing on temperature and rainfall. There have been a diverse range of early, medium and late flowering/ yielding varieties of apples selected for the project, with this greater diversity adaption to the manipulated climate may be observed.

I will be recording key phenological events throughout the year in the life cycle of the trees, such as bud break, flowering date and leaf fall. These along with measures of growth, yield and quality will allow me to assess possible positive or negative effects a future climate may have for the apple tree itself and the top fruit industry.”

**the study of cyclic and seasonal natural phenomena, especially in relation to climate and plant and animal life.*