

Applewood: instruments from the orchard

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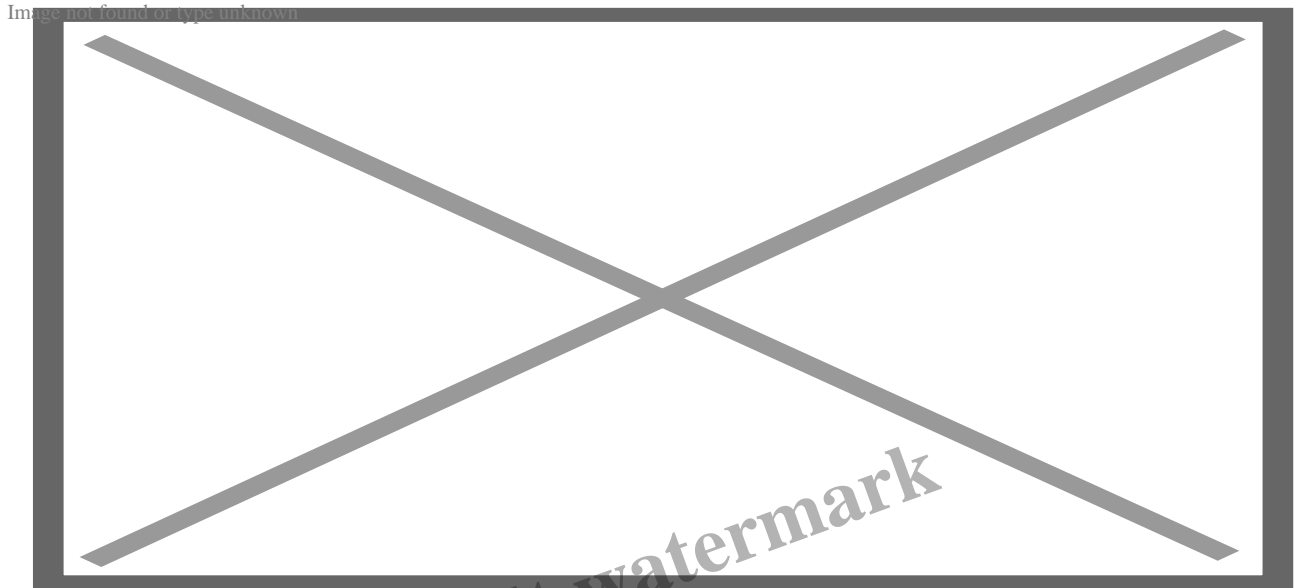


Image: [Gardening Know How](#)

Apples are a staple fruit for many people, and it turns out that apple trees produce a great guitar wood too. Here I look at the history of apple cultivation and the decline of the traditional apple orchard – and, of course, an applewood guitar.

It's easy to forget that all of the fruit we buy at the store grows on some kind of plant, and that plant is often a tree. Many species of tree produce edible fruits that sustain humans and a wide array of animals and birds. A few types of fruit have become staples in human diets around the world and are now produced in large quantities in cultivation. In this post, we'll look at a fruit tree that also produces wood that makes great-sounding guitars – the apple.

Louis Armstrong – “You're the apple of my eye” (1951)

“She'll be apples”

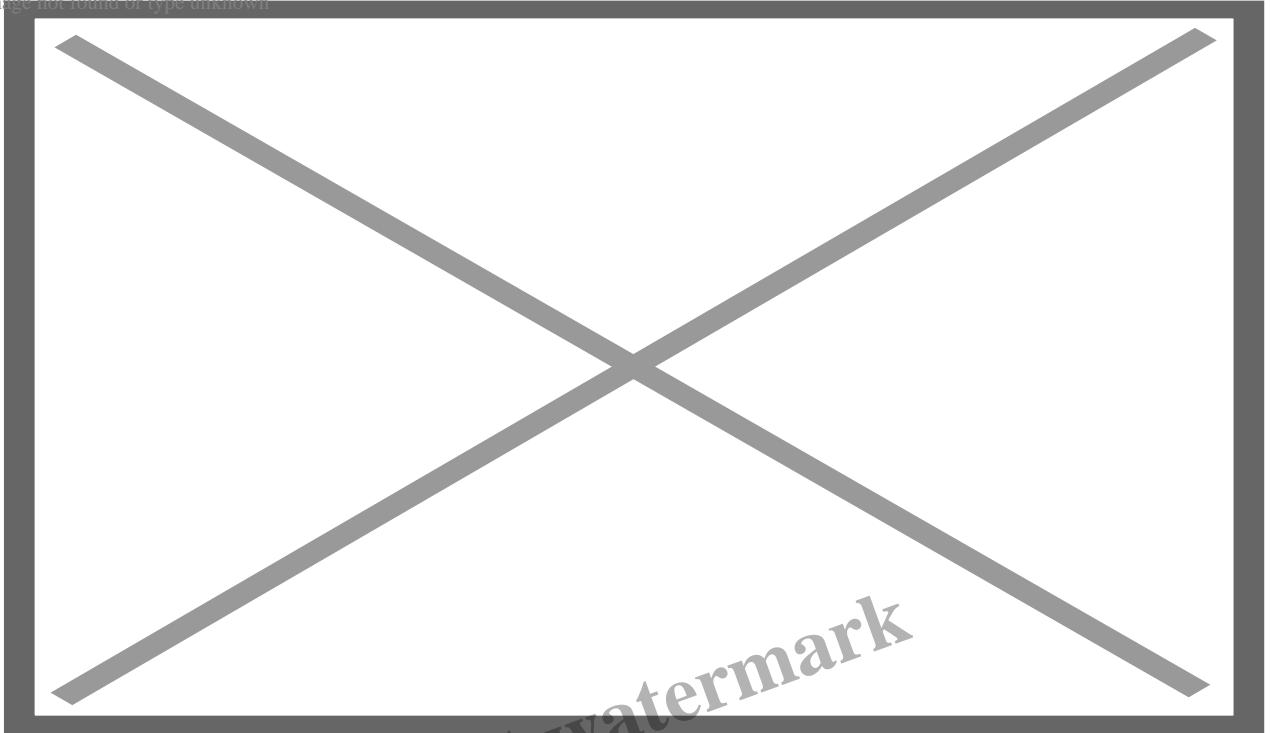
“She'll be apples” is an old [Australian saying](#) meaning everything will be all right. The humble apple is strewn through the fabric of human history and culture.

Adam and Eve were expelled from the Garden of Eden because they picked the forbidden fruit. Interestingly this was not specified in the Bible as being an apple, but the [apple got cemented into place](#) as the offending fruit in later depictions. It's the apple that got stuck in Adam's throat – and the reason we all have [“Adam's apples”](#) now.

It was also an apple that supposedly [hit Isaac Newton on the head](#) while sitting under the apple tree

near his house in the mid 1660s and gave him the inspiration to figure out how gravity works.

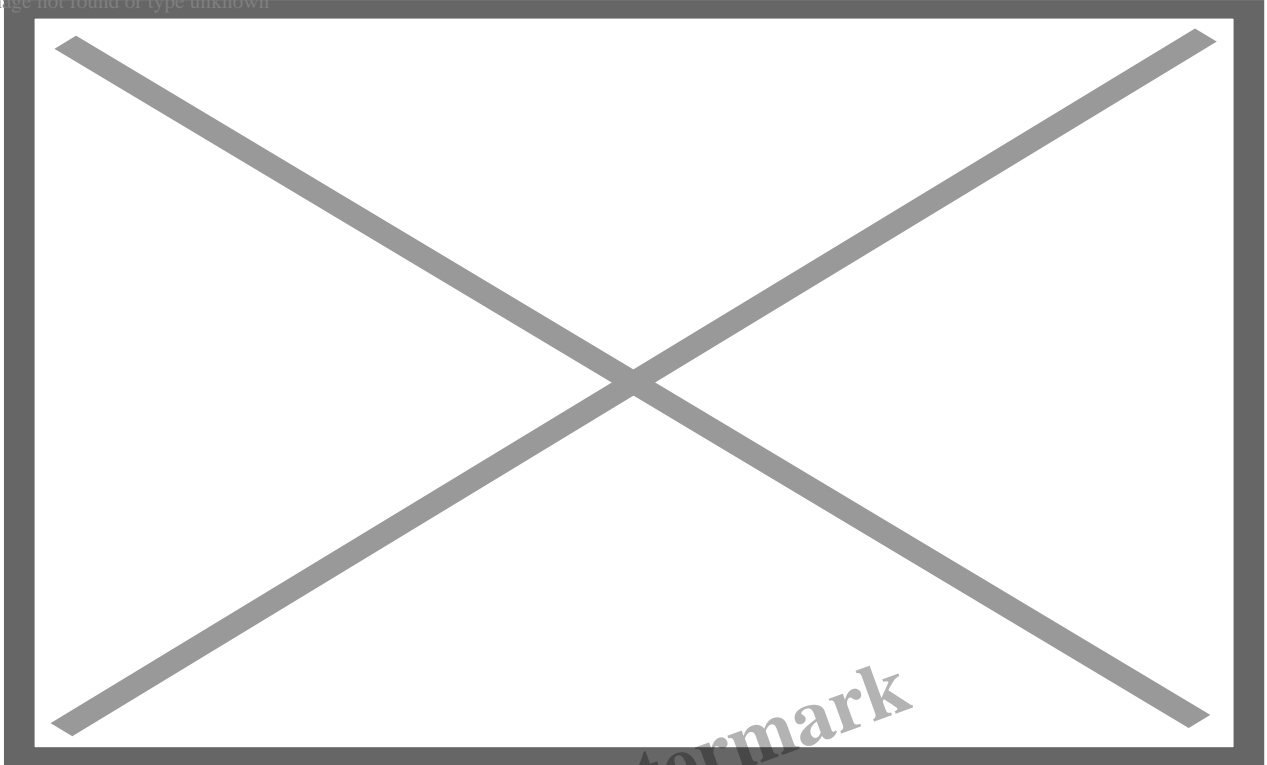
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The tree under which Newton had his apple epiphany, outside his former home in Lincolnshire. Source: [Wikimedia](#)

Another “apple on the head” story relates how [William Tell](#), the Swiss hero from the 14th century, shot an apple from the top of his son’s head with his crossbow to avoid them both being put to death by the evil bailiff Gessler.

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Vintage apple crate label. Image: [Etsy](#)

As a young boy growing up in Scotland, I avidly watched the British TV show “The Adventures of William Tell”. Each episode started with the famous apple-on-the-head scene.

The Adventures of William Tell (ITV, 1950s-60s)

As children we all also learned that “An apple a day keeps the doctor away”, unless of course you’re [Snow White](#) and the wicked stepmother gives you a poisoned apple. And a “[bad apple](#)” is someone who creates problems or causes trouble for others, or whose behaviour reflects poorly on or negatively affects or influences those around them.

Growing apples

Apple cultivation has a long history, and today apples rank among the [most abundantly produced](#) fruits in the world.

With rising human populations and increasing demand for good quality fruit and vegetables, production methods for the major fruits have changed dramatically over time. Some fruits were originally harvested from the natural woodlands and forests in which the fruit trees grew. Increasingly, though, fruit trees were brought into cultivation and grown in orchards where the trees could be tended and harvested more readily. In addition, wild varieties of fruits were increasingly subject to selective breeding to create new varieties.

In the case of apples, native apples – or [crabapples](#) – are found in many parts of the northern hemisphere. Today’s edible apples are derived from a wild ancestral type in central Asia that has been

cultivated and bred for thousands of years. The [cultivated apple tree](#) (*Malus domestica*) is now found around the world, and over 7500 varieties of apple have been bred and grown, all with distinct features.

Apples can be propagated by seed, but the offspring are usually quite variable. The commonest form of [propagation](#) is by cuttings and grafting. So, trees with the exact same genetic makeup can be propagated, effectively forever. Indeed, there are [trees grown from cuttings](#) of Newton's apple tree found in several places around the world.

Where have all the apples gone?

Despite the huge variety of apple cultivars, most of us only ever come across a few different types of apple. We're lucky if we see more than a handful of different apples in the store at any given time, although these are generally available year-round.

The decline in diversity of apples and many other food types, coupled with the loss of unusual and rare varieties, led Dan Saladino to write a book entitled "[Eating to Extinction: The World's Rarest Foods and Why We Need to Save Them](#)" (2022)

Clare Finney discussed the topic in a UK context in a recent [Guardian article](#) entitled "Endangered foods: why our diet is narrower than ever – and the UK urgently needs to save these seven foods". She wrote:

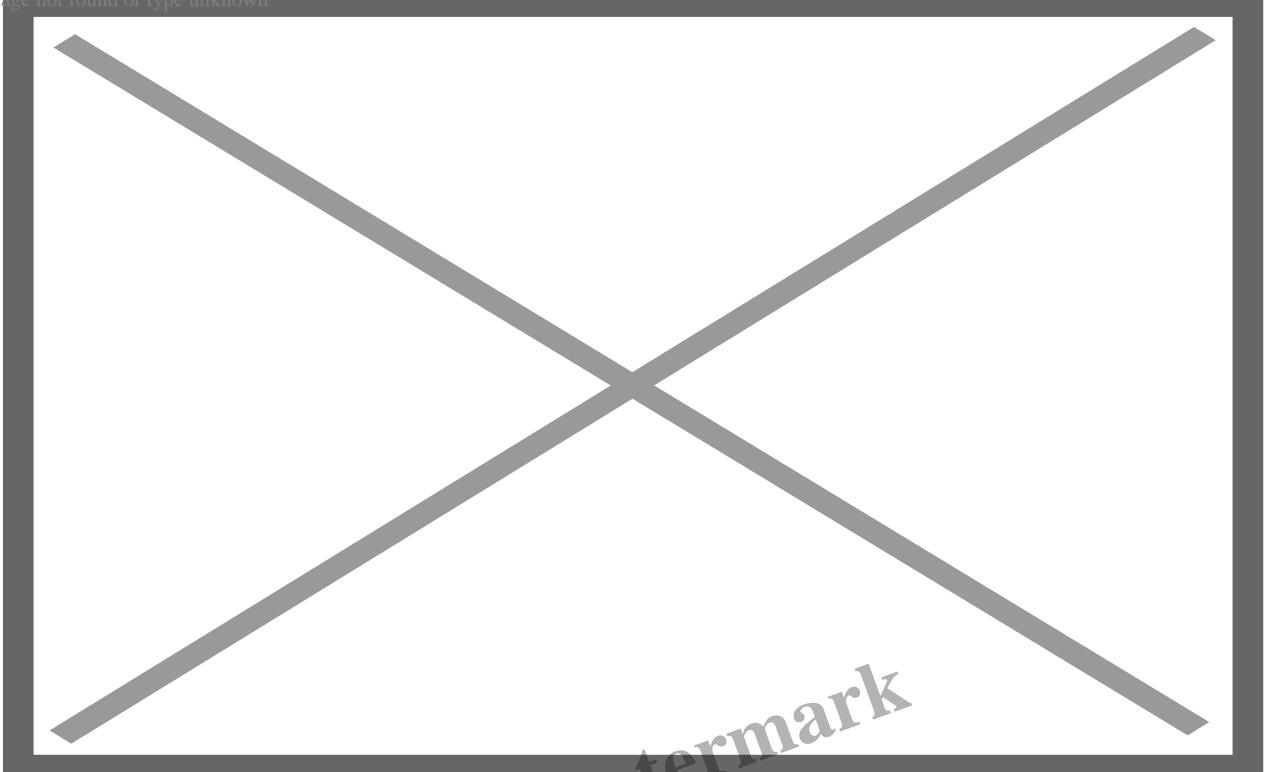
In Victorian Britain, you could eat an apple a day for four years and not eat the same apple twice. Then, during the 20th century, breeding programmes in New Zealand, Australia and South Africa focused on high-yielding varieties that could be picked early and transported long distances. The creation of refrigerated container ships meant these apples could be carried around the globe, and led to the destruction of apple diversity everywhere. "Unable to compete, two-thirds of British orchards were gone by the 1980s," says Saladino.

Uniformly sweet, crunchy and consistently coloured apples replaced once popular varieties such as the Norfolk beefing. Richly flavoured and long-lasting, Norfolk beefings were often slowly dried in the ovens of Norfolk breadmakers to create biffins – a Victorian Christmas delicacy. Today, only a few trees remain. The Norfolk beefing is one of hundreds of such apple stories, representing the loss of regional dishes, biodiversity and food security. "We import 70% of the apples we eat, despite having one of the best climates for them," Shane Holland (Slow Food UK) says.

The decline in apple diversity is symptomatic of a broader decline in the diversity of crop-derived foods available. Finney says: "The data is jaw-dropping. Of the 6,000 plant species humans have eaten over time, the world now mostly grows and consumes only nine, of which just three – rice, wheat and maize – provide about 50% of all calories humans consume. Add potato, barley, palm oil, soy and sugar to the mix, and you have 75% of all the calories. But diversity within these crops is also disappearing, as we rely on an ever-smaller number of high-yielding varieties."

[Clare Finney 2023](#)

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Norfolk beefing apples. Photograph: [Holmes Garden Photos/Alamy](#)

The vanishing English orchard

In their book “[English Orchards: A Landscape History](#)” (2022), Gerry Barnes and Tom Williamson discuss how orchards were an important element in the traditional English landscape, which provided not only fruit but a wide range of other benefits.

“While their primary purpose was the production of fruit, they were also valued for the grazing they provided, as well as for the fodder, fuel, honey and, on occasions, soft fruit which they produced”. They also provided important habitat for an array of wildlife species.

Barnes and Williamson also document how the nature of orchards changed through time, particularly with the advent of more intensive cultivation methods in larger, commercial orchards. From the 1950s onwards, “most new commercial orchards comprised short-lived trees on dwarfing rootstocks, intensively sprayed, growing in bare earth, or in strips of bare earth separated by grass, kept short with mowers towed by tractors”.

The UK’s People’s Trust for Endangered Species [found](#) that 90% of traditional orchards have been lost since the 1950s to neglect, development or conversion to intensive modern orchards which contribute a negative impact on biodiversity.

A [2004 article](#) in The Independent called the decline of orchards in Britain a growing crisis. The article’s title, “Rotting away: Demise of the English orchard is blamed on red tape and bland imports” tells the story.

Highlighting the dimensions of the problem, the article lists some sobering facts and figures:

- Kent has lost 85 per cent of its orchards in the past 50 years.
- In 1996-7, 4.3m kg of surplus pears were dumped in landfill sites or fed to pigs.
- Orchards are havens for bats, badgers, owls and woodpeckers.
- A century ago, more than 200 varieties of fruit could be found growing in a single orchard and each village would have their unique varieties of plums, damsons, cherries and apples.
- Half of Britain's pear orchards and two thirds of Britain's apple orchards have disappeared since 1970.
- There are 2,300 known varieties of apple, but the Cox and the Bramley dominate Britain's orchards.
- Norwich in the reign of Elizabeth I was described as "either a city in an orchard or an orchard in a city, so equally were houses and fruit trees planted". Now more than two thirds of Norfolk's orchards have gone.

Although many orchard-owners recognise the ecological and cultural value of old orchards, various iterations of government funding schemes have made it difficult to justify maintaining them. Perverse incentives, combined with the reduced demand for local apples in the face of cheap imports resulted in [many traditional orchards being taken out](#).

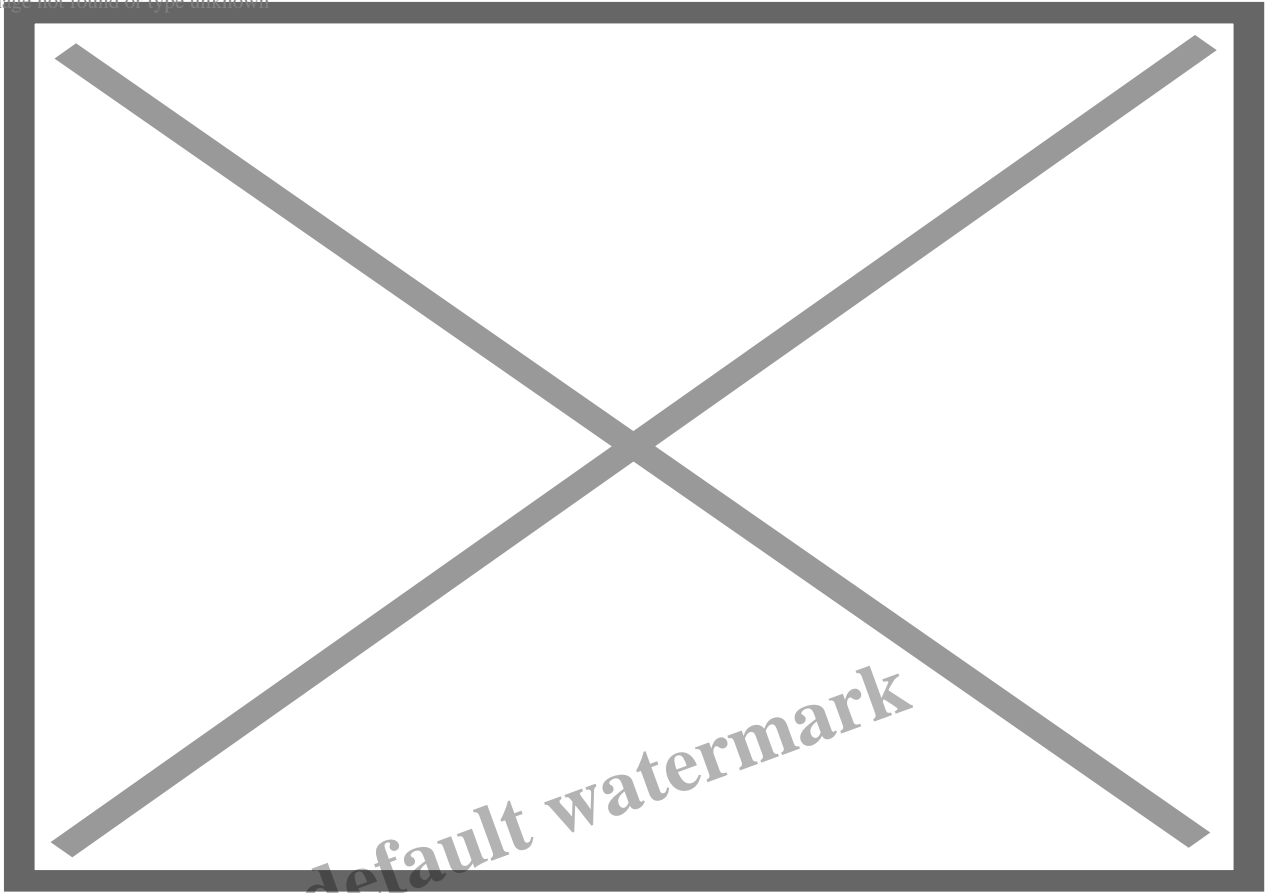
Newer orchards that are established in Britain and elsewhere are quite different in character to the old established orchards. Rather than large, well-spaced trees, there is a trend towards [high density tree planting](#), with smaller trees pruned to produce multiple stems or grow on trellises.

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The Old Apple Orchard, Wisbech St. Mary (England). Photo by: [Mark Shirley, Flickr](#)

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Modern trellised apple orchard (Florida, USA), Source: [ResearchGate](#)

Meanwhile in the US

Similar patterns of changing production methods and reduced diversity of apple varieties in the supermarket are found in many parts of the world.

In the US, one of the country's fondest legends is that of [Johnny Appleseed](#), a folk hero and real-life pioneer apple farmer in the 1800's. Johnny Appleseed's real name was John Chapman, and his exploits in establishing apple trees across the country are, indeed, the stuff of legend. It wasn't just Johnny Appleseed, though – many settlers brought tree seedlings with them to establish their own apple trees in their new homes. Apple trees accompanied the settlers as they moved west.

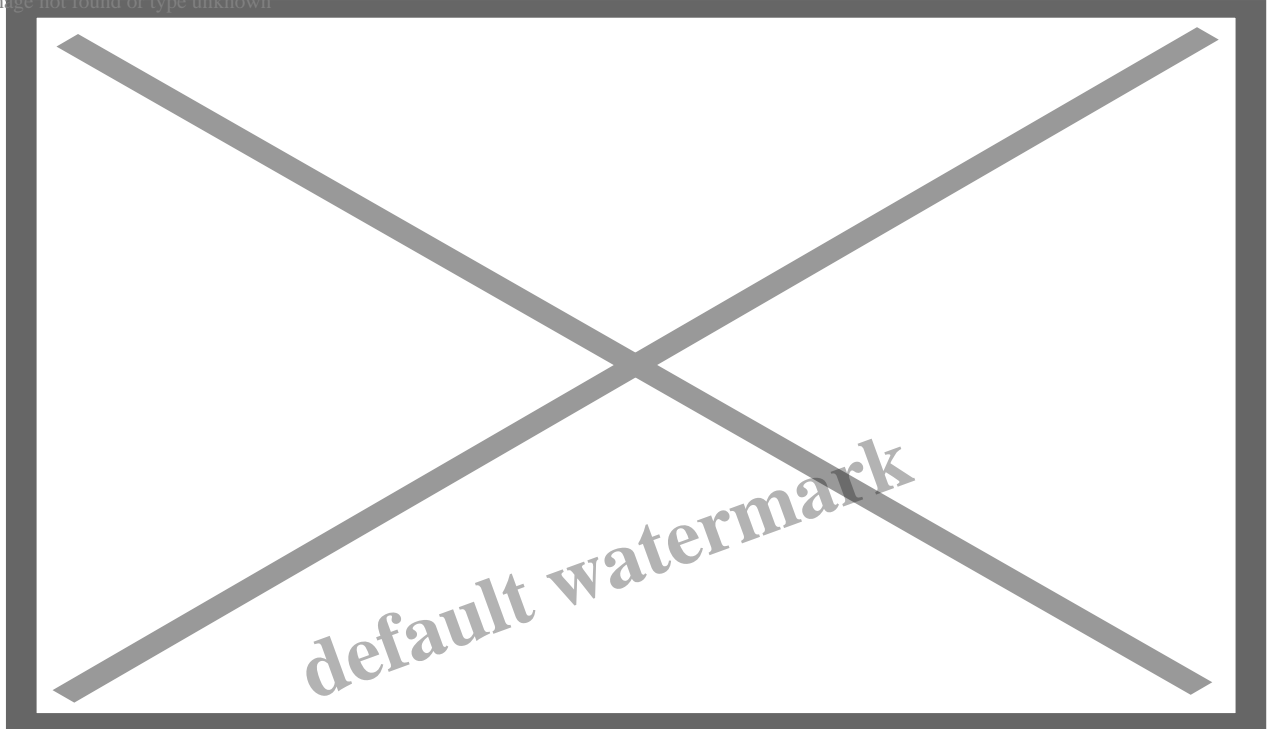
But 200 years later, a similar picture emerges of loss of local orchards, shifts to mass-produced varieties and less diversity in the shops. Added to that, there's now a phenomenon called "[Rapid Apple Decline](#)" affecting orchards across the country. Research into what causes the sudden demise of apple trees has proven inconclusive, but it's likely the result of multiple interacting factors – perhaps changing climatic conditions making the trees more susceptible to pests or pathogens.

Rediscovering an apple tree legacy

The Nature of Music project was a bit of a change of focus for me, and it turns out that I'm not alone in

finding new directions and interests. While I moved from restoration ecology to guitars, my friend and colleague [Katie Suding](#) at the University of Colorado in Boulder discovered apples. Katie is one of the brightest and best ecologists in America and has built a stellar career in plant ecology. She and I have collaborated on many occasions and share common interests relating to how ecosystems can be better understood, managed and restored.

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Katie Suding. Photo: [EarthLab](#)

Katie maintains a very active [research program](#) with a great bunch of students and postdocs focusing on applied ecological questions. But a few years ago, she became fascinated by the discovery of [old apple trees](#) in unlikely places around her home town of Boulder, Colorado. These trees were the legacy of the early settlers in the area – often planted next to cabins in the late 1800s. The cabins are no longer evident, but some of the old apple trees remain.

Katie started The [Boulder Apple Tree Project](#) in 2017 to explore the identity and history of apple varieties in Boulder and the surrounding area. An interesting historical topic in its own right, but also with potential to identify, conserve and utilise varieties of apple that may also be useful in improving future urban agricultural planning.

You can hear Katie talking about the project in a TEDx talk in this video.

Ted talk Curiosity starts in your own backyard | Katharine Suding | TEDxCU

Apple guitars?

So, what have apples got to do with guitars? You guessed it – it turns out apple trees, as well as producing apples and cider, also have wood that works exceptionally well in building guitars. The last

couple of posts were inspired by my visits to Oxford and Cremona last year. As part of that trip, I was also excited to be able to pick up a guitar I had bought from a relatively new independent guitar maker, based in Northern Ireland. [Kurtis Scott](#) recently set up Pict Guitars having worked for a while at [Lowden Guitars](#). Lowden is a well-respected maker of high-quality guitars, and Kurtis got a job there after completing an engineering apprenticeship. At Lowden, he worked on most aspects of guitar building, becoming a senior craftsman after 2 years.

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Kurtis Scott. Photo: [Qest](#)

During COVID lockdown, he rented a workshop space and started building his own guitars. With the help of a [QEST scholarship](#), his skills continued to improve, and he's making -and selling – exceptional guitars. The aspect that attracted me to Kurtis's work was his focus on sustainability. He's considered the processes he saw at Lowden and figured out ways to increase the sustainability of many aspects of the guitars he makes, including the use of alternative types of wood.

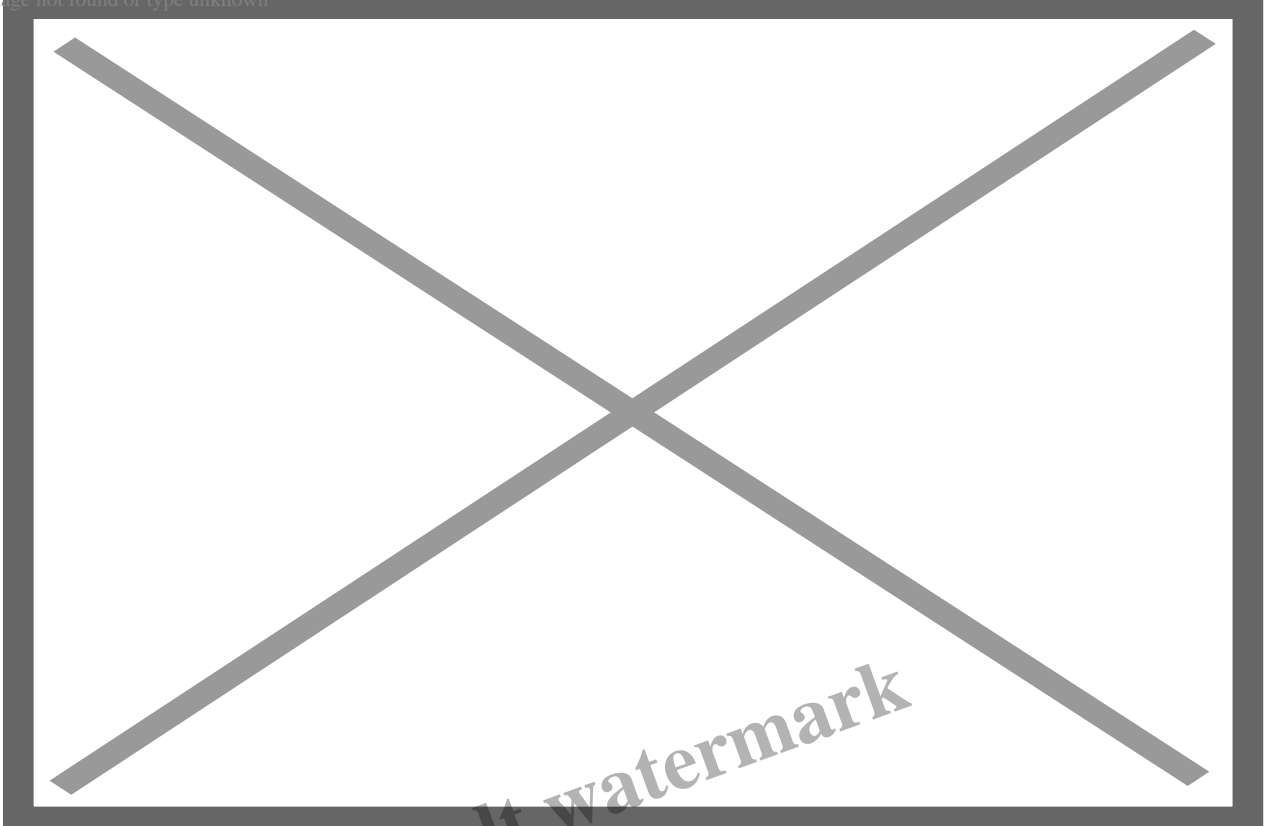
The guitar I ordered was waiting for me at my son's house in Oxford when we visited in October. It's an interesting mix of traditional and alternative materials, carefully crafted into an instrument that I fell in love with as soon as it came out the case. It looks and sounds amazing. The top was beautiful Bearclaw Sitka Spruce. The neck was a mix of plum wood and recycled Brazilian mahogany that came from pews that were being replaced in a Belfast church. The fingerboard and bridge were [Rocklite](#) – a manufactured composite that uses smaller quantities of wood to make what the company describes as “faux” Indian Rosewood and Ebony.

But the standout feature of the guitar is the wood used for the back and sides. It's apple wood and looks sensational. Kurtis told me that he got the wood from a supplier in Germany, and hence it's not clear where it came from. It seems quite likely, however, that it would have come from an old apple tree that either died or was cut down as part of the removal of traditional orchard.

Here's a few photos of the guitar.

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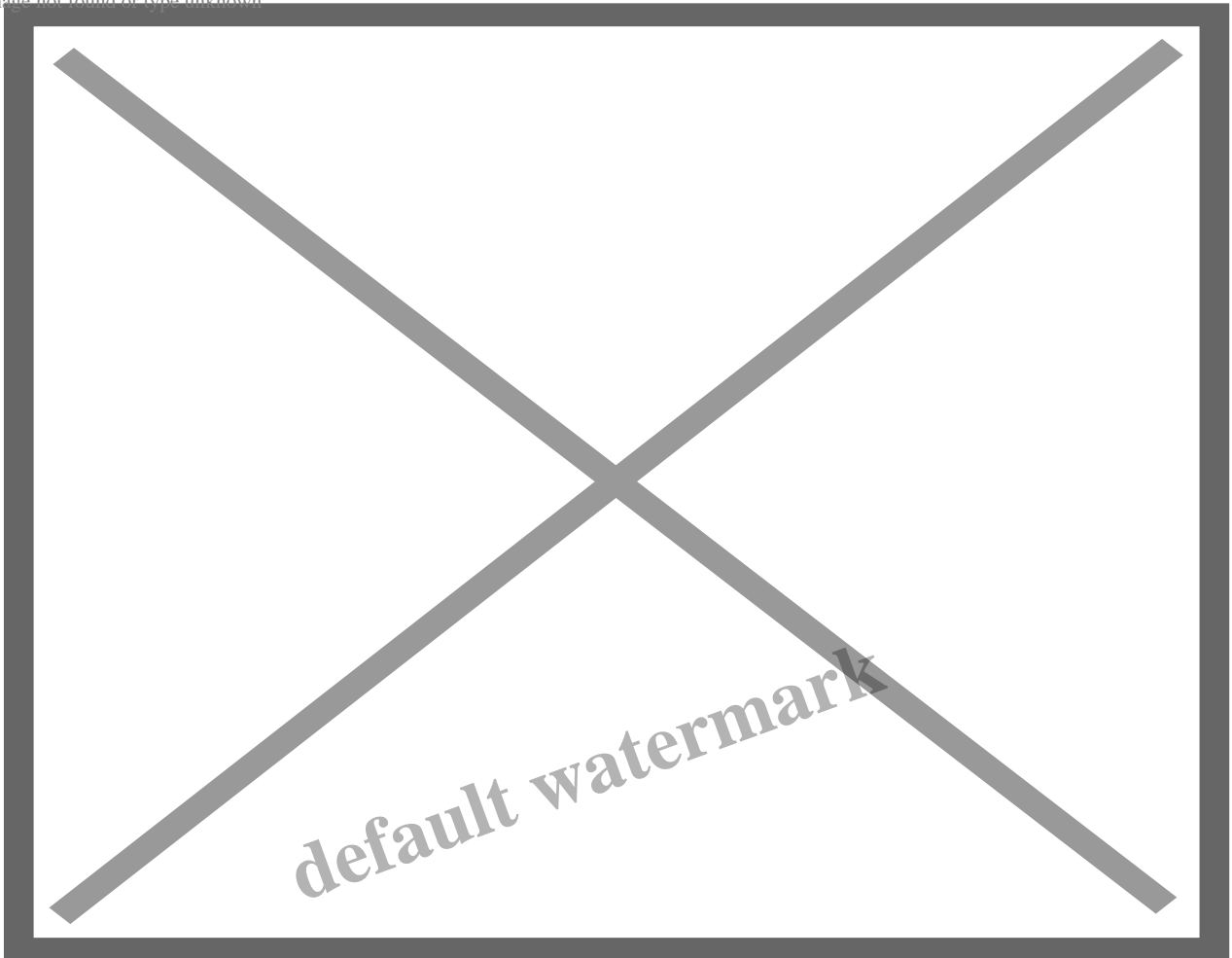


With my son, Hamish, in Oxford. I'm playing the Pict guitar and he's playing a Lowden F35 with Bog Oak back and sides. Bog Oak, like the ancient Kauri featured in an [earlier post](#), was buried in peat for thousands of years before being turned into a guitar.

166 years ago..

Apple wood may not be a mainstream choice, but it has been used by European guitar makers in the past. In a [previous post](#), I described the collection of historical guitars housed at the Museo civico "Ala Ponzzone" in Cremona. I highlighted the fact that many of these guitars were made with what are now considered "alternative" woods. One of the guitars on display was built in Torino in 1856 by Antonio Guadagnini. Guadagnini had used the same wood combination – spruce and applewood (albeit a different spruce) – for this guitar as Kurtis Scott used for my guitar 166 years later. Amazing!

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Applewood guitar – Museo civico “Ala Ponzone”, Cremona

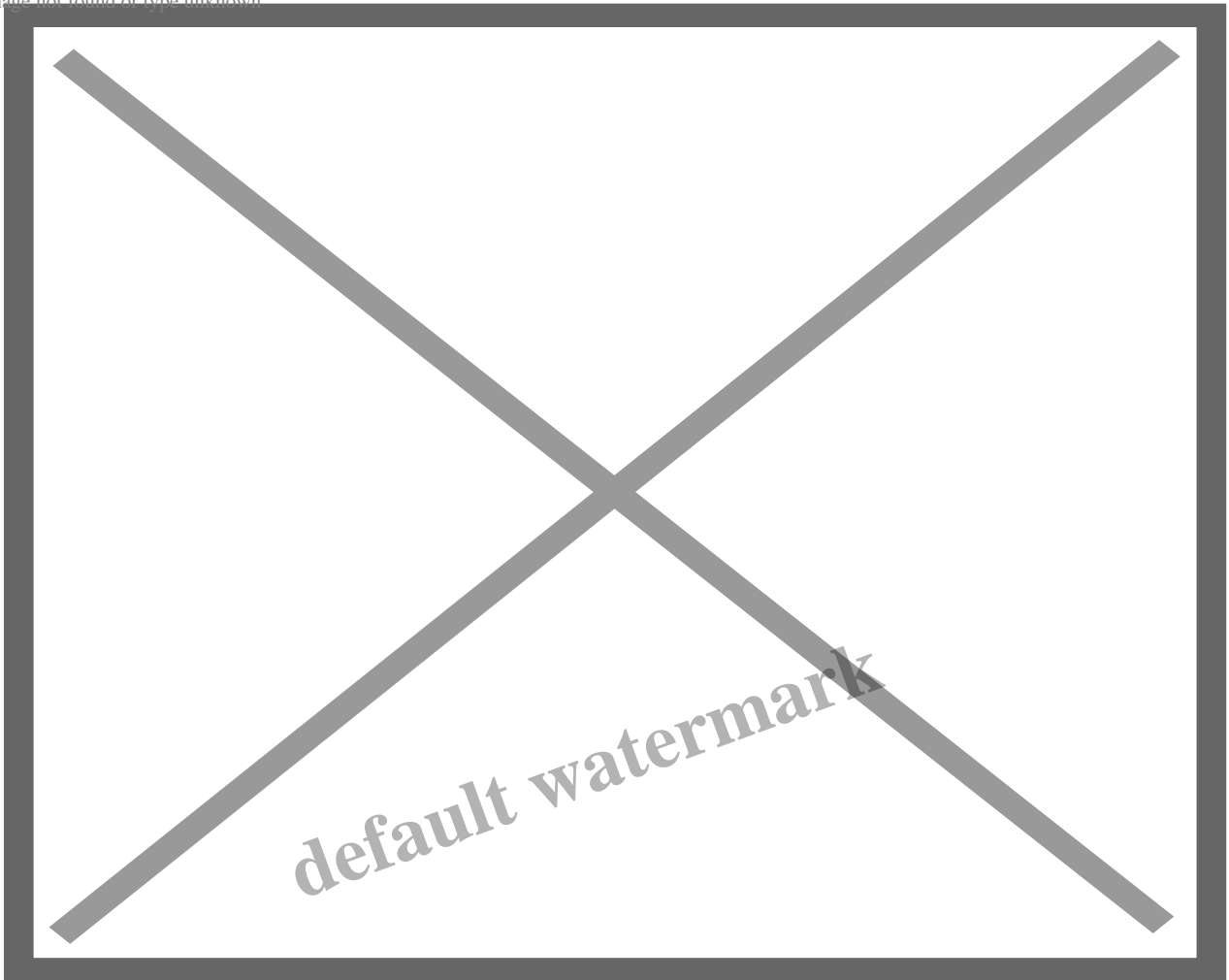
A brief return to violins

In another flashback to [a previous post](#), I wrote about visiting Oxford and Cremona and observing the historical violins on display in museums. I also noted that modern violin makers adhere mostly to traditional designs and materials, and that there is much less innovation compared with guitar making.

As often happens, not long after I wrote that I came across an enterprise that proved me wrong. The [Redwood violin project](#) in Sonoma County, California, aimed to build a violin using [only materials available locally](#).

The project started in 2020, during the Covid lockdown, and was designed as a celebration of place, history and community. Hence the materials for the violin were selected not only for function but also for their local significance. Coastal Redwood was selected for the top and sound post, and the back, neck and sides were – you guessed it – applewood.

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The Redwood violin – applewood back. Photo: [The Redwood Violin Project](#)

In Sonoma County, as in many other places, apple orchards were an important part of the landscape, but have declined in recent years. The wood for the violin came from a local orchard near Sebastopol. Here's a quote from the [project website](#):

“As you drive the hill around Sebastopol you will see many old apple orchards, white with blossom in the spring and warm with color in the fall. These orchards represent are an important cultural and historical legacy in our region, but sadly the apple industry has been in decline since the 1970's, out-competed by larger, more modern operations in other parts of the country, and overseas. While many orchards were turned over to the grapes, and some were simply left untended, the working orchards that have survived and thrived have done so by growing with new specialist markets.”

Will she be apples?

Apples are not the only fruit trees that produce guitar woods – in later posts, we'll also look at other fruit trees such as cherry and mango, as well as nut-producing trees like walnut and chestnut.

Will applewood ever become a staple guitar wood? It's unlikely but not impossible, given the success Taylor has enjoyed using [salvaged urban trees](#) to produce their Urban Ash series. Applewood can be salvaged from individual trees that need to be removed or from the removal of whole orchards. Ideally, traditional orchards could be maintained for their wildlife and cultural value – but if they have to go, at least something good could come from them.

Apple trees, like other trees, also succumb to damage from floods and storms. In fact, a tree in Cambridge cloned from the apple tree that Isaac Newton sat under was blown down in a major storm in 2022. As a [news article](#) noted, the tree “succumbed to gravity, the very force it helped the physicist to formulate, after being hit by the powerful winds of Storm Eunice”. Rather than simply burning or disposing of the wood, this and other historical trees could be given a new life as part of a fine guitar.

Wood from large old apple trees may not, of course, be a lasting resource, given the trend towards higher density trees and more industrial apple growing. So, maybe there's only a finite window in which applewood will continue to be available for guitars. Let's hope, however, that projects like Katie Suding's can help maintain the old apple trees in the landscape. Then they can continue to grow apples while they are alive and then their wood can later be available for folks like Kurtis Scott to make guitars with.

Let's finish with a World War II song by the Andrews Sisters featuring another apple tree.

1942 Andrews Sisters – Don't Sit Under the Apple Tree

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