



Our Apple Orchards

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By **Anne-Marie Bur** with photographs by **Anne Purkiss** and others
for Brighton Permaculture Trust and Action in rural Sussex



Foreword

I still remember the day when I was six years old and I saw lots of apples lying on the ground in my grandparents' garden. I thought someone had dropped them until my grandfather explained that they were underneath his apple tree and that is where the fruit came from. The following spring he also showed me apple blossom and explained that the fruit grew from inside the flower. It was magical, just like this book.

Maybe it will inspire you to plant your own apple tree and you could even choose one of the rare and delicious Sussex apple varieties. That way you will help to make sure that we can enjoy all kinds of apples long into the future.

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Cookery writer

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A photograph of an orchard with several apple trees. The trees are covered in green leaves and many red and green apples. The ground is covered in green grass. The sky is visible in the background.

What is an orchard?

An orchard is a place where fruit trees grow. In an orchard you might find a variety of fruits including pears, plums or cherries. But the fruits you are most likely to find are... APPLES!

Most orchards have more than one kind of apple tree...

How many kinds of apple are there?

In the supermarket you might find several different kinds of apples. Go to a fruit farm and you will find a lot more.



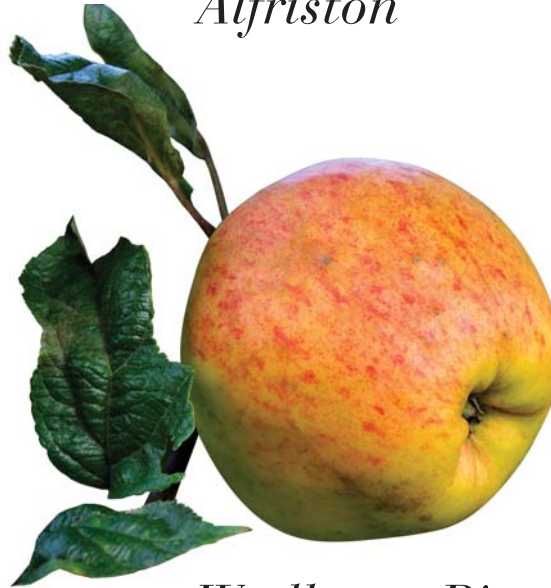
There are over six thousand kinds of apple in the world and nearly thirty of them come from Sussex. Each one is different from all the rest.



Alfriston



Duck's Bill



Wadhurst Pippin



Hawkridge



Knobby Russet



Saltcote Pippin



Tinsley Quince



Golden Pippin

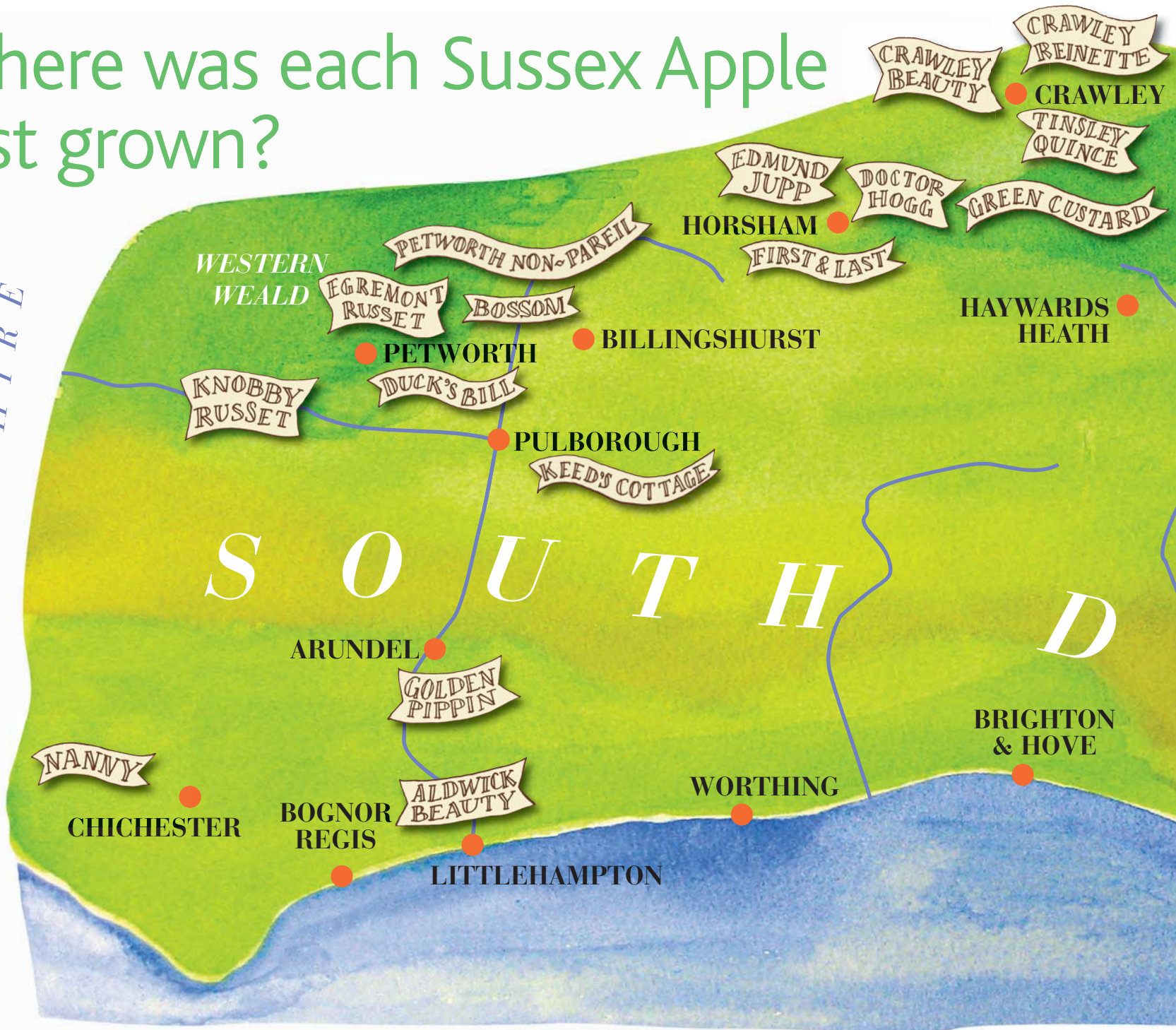
Some of the differences between apple varieties are:

- size,
- shape,
- colour of the skin,
- colour of the inside flesh,
- smell, and of course,
- taste

Some ripen as early as July, some not until the end of October. And each of these apples has been given a name.

Where was each Sussex Apple first grown?

H A M P S H I R E



S U R R E Y



EAST GRINSTEAD

FORGE

ASHDOWN FOREST

WADHURST
PIPPIN

K E N T

WADHURST

ASHDOWN
SEEDLING

CROWBOROUGH

MAYFIELD

SUSSEX
MOTHER

CORONATION

MANNINGTON'S
PEARMAN

HEATHFIELD

UCKFIELD

ALFRISTON

SALTCOTE
PIPPIN

RYE

BATTLE

GOLDEN
BOUNTY

MAREDA

HASTINGS

BEXHILL

HAWKRIDGE

HAILSHAM

POLEGATE

EASTBOURNE
PIPPIN

EASTBOURNE

LEWES

NEWHAVEN

How to plant an apple tree



Fruit trees are first looked after in a **tree nursery**. In the winter the leaves fall off and growth stops. The young trees are 'dormant'. When this happens they can easily be dug up and moved to the orchard site.



1 Keep the roots moist

It is best if the **roots** of the tree are soaked in a bucket of water for two hours before planting, making sure they are all covered.



2 Attach the tree to stakes

A large hole is dug in the soil and two **stakes** are driven into the ground to support the tree. The tree is placed in the hole and loosely attached to the stakes with **tree ties**.

Until they can grow lots of new roots, young fruit trees need support to prevent them from being blown over.



3 Fill in the hole with mix of compost and soil

The soil goes back around the roots. It is a good idea to add **compost** to the soil. This adds nutrients (food) and improves the texture of heavy clay or chalky soils making a more welcoming environment for the young roots.



4 Press down the soil

By pressing down the soil gently you make sure the roots are in contact with the soil – you get rid of **air pockets**. Now you can tighten the tree ties.



5 Put down mulch

A layer of **mulch** is added. This helps to keep the moisture in the soil, and to prevent weeds growing around the tree. It could be a piece of textile or something such as a layer of bark chippings.

This means the tree can take best advantage of everything that is in the soil to grow well. It doesn't have to compete with other plants trying to grow in the same soil. **Then...**



6 Attach netting

Do you have rabbits living nearby? If so you must surround your trees with **netting** to stop them gnawing at the bark.

Rabbits love eating the bark of young fruit trees in winter!



7 Tie on a metal label

The label tells us not just that it is an apple tree but what kind of apple tree – you can include the date it was planted, and perhaps who planted it.

If the label is made of metal it will still be there when you are grown up!



From a distance your newly planted apple tree may just look like a thin stick. But take a closer look and you will see signs of life – the 'stick' has **buds** and in just a few short weeks they will transform the appearance of the apple tree.

It can be hard work to plant an apple tree properly, but it is worth giving your apple tree the best start so it will grow the best apples!



Spring: from buds to blossom...

As the weather warms up and the days grow longer the tree begins to wake up. The buds burst open and turn into leaves or flowers, called **blossom**. Apple blossom smells wonderful.

Apple blossom comes in a range of shades from pale pink to creamy white.

As soon as the blossom appears, **pollination** can occur, essential for the apples to start growing – can you see them?

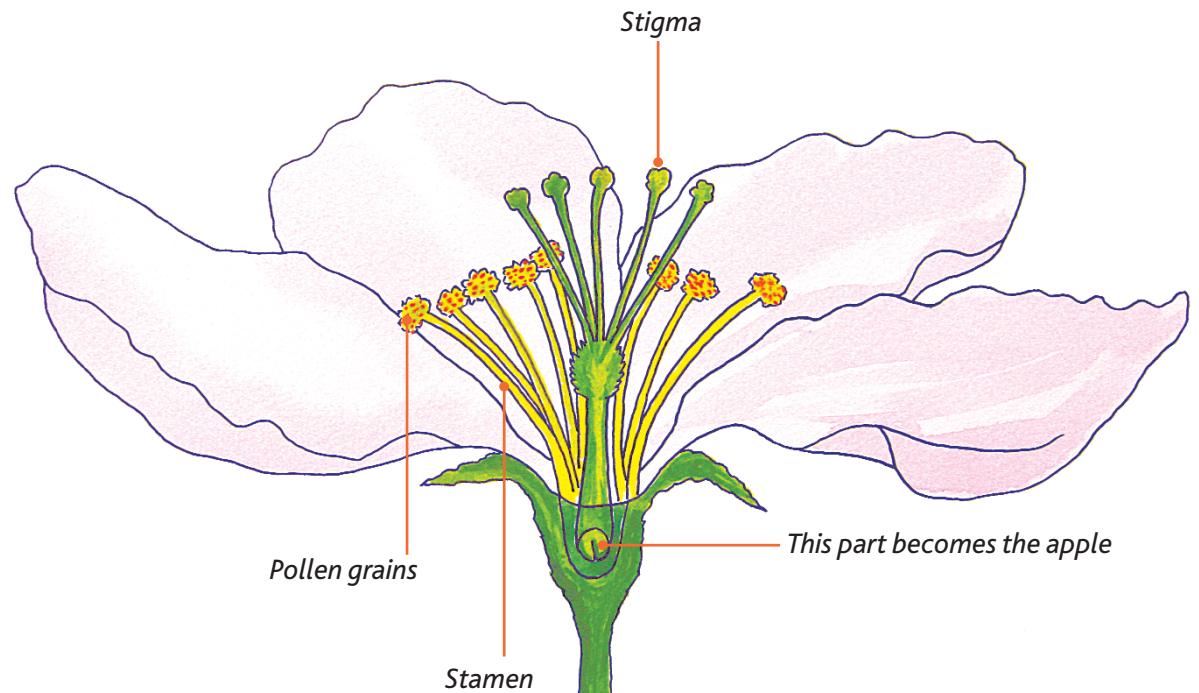


Pollination

For pollination to happen, tiny grains of **pollen** from a **stamen** need to land on the **stigma** of another blossom. Trees can't move so they rely on flying insects, especially bees, for this to happen.

As the bees fly from flower to flower collecting nectar (to make honey) they often brush against the pollen, which sticks to the bee and a few tiny grains are then transported to the next flower the bee lands on.

A grain of pollen may fall off onto a stigma. Cells in the pollen travel down the tubes of the stigma and the flower is fertilised and an apple will begin to grow.



Apple trees under attack!

There are some very common pests that can really slow down the growth of young trees and even make their branches grow in odd shapes. Be observant and protect your orchard from invaders!

Some moths lay their eggs on the trees and they become caterpillars which eat the leaves. If you see them, pick them off. Can you see the caterpillar on this branch?



Aphids are a common pest. Look under any curled up leaves in spring and you will often see a mass of tiny creatures.

Encourage ladybirds – they love eating aphids.



Apple trees eat and drink



Fruit trees need water and food (nutrients). To help them to grow healthily it is a good idea to give them special care in the first few years – watering them occasionally in hot weather, and perhaps spraying the leaves with a **foliar feed** that is made from seaweed and iron.

Summer



In summer, orchards provide beautiful shady places to picnic and play. At the centre of some of the flowers, small apples begin to develop. Every day they get a little rounder. But don't try eating them yet because they will be hard, dry and bitter. It takes a whole summer to make an apple sweet and juicy so be patient a while yet.





Autumn

The fruit ripens. When an apple is ready to pick it will come away easily from the tree if you cup it in your hand and give it a twist.

If the apples aren't picked they eventually drop off the trees on to the ground. This happens a lot in windy weather and these apples are called windfalls. **Windfall apples** provide food for lots of orchard visitors.



Female blackbird © Paul Brock



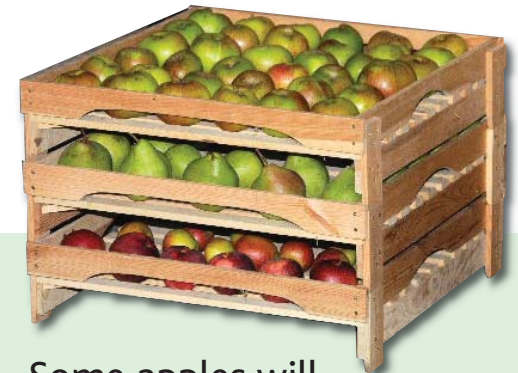
Reaping the harvest

Some apples, such as **HawkrIDGE** are ripe by late summer but for others we have to wait until well into the autumn. Some apples need to be eaten quickly but others can be stored over the whole winter if kept somewhere cold and dry and dark. The taste of some apples changes over time. **Egremont Russets**, for instance, tend to taste sweeter and nuttier if kept.



Apples can be pressed to extract the juice.

The flavour of the apple juice produced varies depending on the combination of apples you press. If you include lots of cooking apples, such as the **Alfriston**, you will have a sharper tasting juice. If you only use dessert apples your juice will be sweeter.



Some apples will keep all winter if stored in a rack like this in a shed or other cool place.



Some schools and community groups have a traditional apple press like this. There's nothing quite like the taste of fresh apple juice!

Cooking with apples



Some apples are called **cooking apples** because they have a very sharp taste if eaten raw, but have a wonderful flavour when used in puddings and cakes.

In fact you can cook all kinds of apples. **Dessert apples** (another name for **eating apples**) are particularly good in apple tarts, for instance.

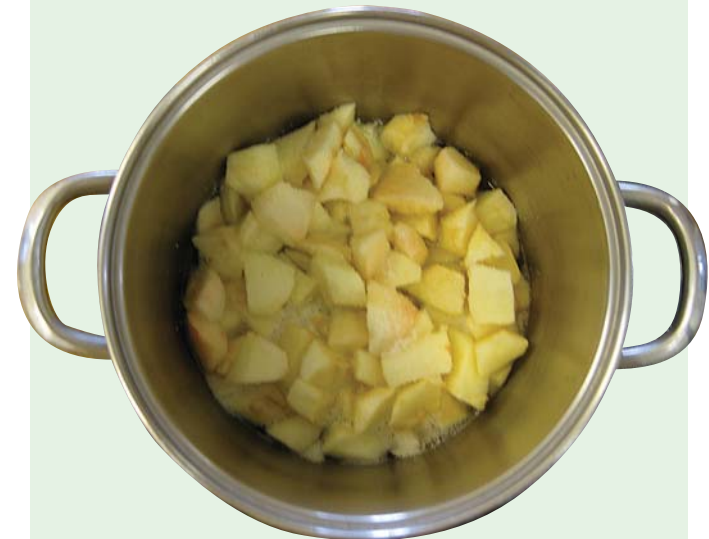


A very simple apple recipe...

Peel some apples, remove the cores, add a little sugar and a few cloves (optional).

Cook till the apples are soft. Some go mushy, some retain their shape – all taste good!

If you want to be a bit more adventurous there are lots of puddings and cakes you can make. You can also use apples in spicy chutneys and warming soups.



Apple, tomato and onion chutney

This is a fresh chutney which needs to be eaten within three days. For chutney which can be preserved, add 100g of sugar to the vegetables, cook gently for 30 minutes longer than described, then spoon while still hot into hot sterilized jars and cover immediately to create a hermetic seal.

Ingredients

- 2 tbsp olive oil
- 2 large red onions (finely sliced)
- 500g apples (peeled, cored and chopped)
- 500g ripe tomatoes (chopped)
- 6 cloves of garlic (finely chopped)
- 1 mild red chilli (chopped) or ½ tsp dried chilli powder
- Salt and pepper to taste

Method

- 1 Heat 2 tbsp of olive oil in a large pan and gently fry the onions until browned.
- 2 Add the apples and tomatoes and sauté for 2–3 minutes.
- 3 Add the chilli and garlic and cook for a further minute.
- 4 Add 1 cup of water, apple juice or stock, and bring to the boil.
- 5 Reduce the heat to a low simmer, cook for 15 minutes or until the chutney has reduced down considerably, stirring occasionally.
- 6 Add salt and pepper to taste and gently stir together.



Spiced squash and apple soup

Makes about 2 litres:

Ingredients

- 1kg squash of your choice e.g. Butternut or Crown Prince (peeled, de-seeded and chopped)
- 2 medium apples (peeled, cored and chopped)
- 2 onions (chopped)
- 2 cloves garlic (chopped)
- 1 litre reduced salt vegetable stock
- 1 tbsp olive oil
- 1 tbsp mild curry powder
- Salt and pepper

Method

- 1 Heat the oil in a large pot and fry the onions until they start to brown.
- 2 Add the chopped apples and squash to the pot and cook for a further five minutes.
- 3 Add the garlic and curry powder and cook for a minute more.
- 4 Add the stock and bring to the boil.
- 5 Reduce heat to a fast simmer and cook for 15 minutes.
- 6 Blend the soup if you prefer a smooth consistency and season with salt and pepper.

Chef's Tip:

Serve this soup with toasted sesame or pumpkin seeds and a swirl of cream or yoghurt.





Winter

In winter, apple trees lose all their leaves and the branches are bare. Each year, apple trees need to have a period when it is very cold. This is why you don't find apple trees in tropical climates.

In some places people visit orchards in the depths of winter and perform rituals to try and ensure a good apple harvest the following year. This is called **wassailing**.

In this photograph, people are singing a special wassailing song. Can you find the wassail cake that they have put in the tree for good luck?





For your trees to have lots of healthy apples, you need to make sure that air can circulate freely around the branches, and that sunlight can reach through to help the fruit ripen.



Sometimes it is necessary to cut out twigs and branches if they are growing too close to each other. To do this, you need a pair of sharp **secateurs**.

This is called **pruning**.

Wildlife in orchards

Orchards are home to a range of wildlife. Insects feed on the nectar in the apple blossom and the wild flowers that grow in the grass beneath the trees. Birds feed on the insects and some nest in the tree branches. Older trees provide homes too for rare beetles, fungi and mistletoe. And lots of animals enjoy eating windfalls – mammals, birds and insects.



Mistletoe © People's Trust for Endangered Species



Noble Chafer © Paul Brock

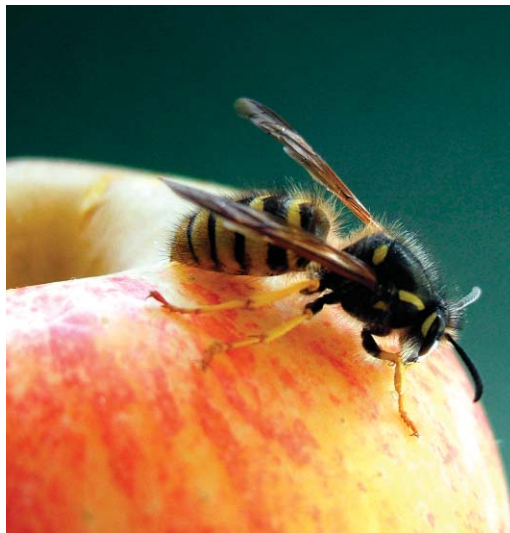


Pearl-bordered Fritillary © Paul Brock

Hedgehogs © Derek Middleton, Sussex Wildlife Trust



Bank Vole © J. Webley



Wasp © Alan Price, Sussex Wildlife Trust



Fieldfare © Derek Middleton, Sussex Wildlife Trust



Blackbird © Darin Smith, Sussex Wildlife Trust



Meadow Cranesbill

Apples in art and design

Artists and designers have made use of apples in lots of different ways.



Adam and Eve by
Lucas Cranach, 1526
In the story of Adam and Eve,
the snake tempted Eve to
take an apple from the tree.

Watercolour of apple by
J Le Moyne de Morgues, 1575
Botanical artists make very
detailed, accurate paintings.
This is quite an early example.



**A four-year old girl holding
an apple**, by Isaac Oliver, 1590
Perhaps the apple in the
girl's hand was a reward for
staying still?

Cushion Cover, 1600
An apple tree is shown in the
centre of this embroidery.





September Plate, made in Delft, Holland, 1750

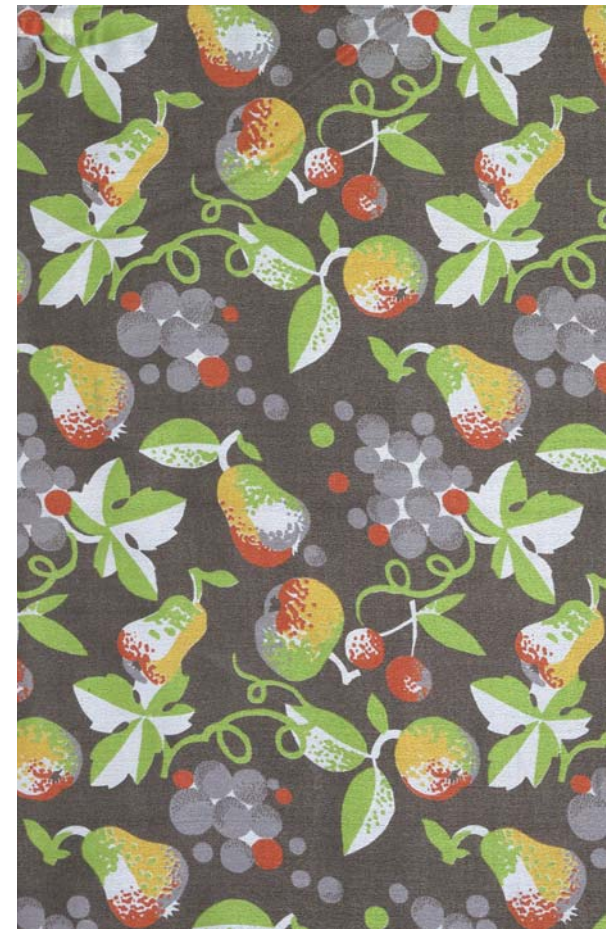
Delft is famous for its blue and white pottery. September is apple harvest time; the apples are being shaken out of the tree.



Bowl made in Iran, 19th century
An original design showing cherry-picking was adapted to illustrate apples or pomegranates.



Pomona – a tapestry design by Edward Burne-Jones, 1900
Pomona was the Roman goddess of fruit trees and orchards.



Dress fabric, United States of America, 1930
This design was printed on silk.

Images: Adam and Eve Courtesy of the Courtauld Institute, all others courtesy of the Victoria and Albert Museum

Eat local apples

If you eat apples that are grown far away, a lot of fuel is needed to transport them to the shops where they are sold. This means that carbon dioxide (CO₂) is released into the atmosphere, which contributes to climate change. So eating apples that have been grown near to where you live is better for our environment. Fruit trees also need less fertilizer than field crops and unlike most crops there is no need to plough the land each year.

Maybe you can plant some apple trees at your school, or in a park or other open space? If you plant some apples which ripen early and others that keep through the winter you can have local apples nearly all year round. You can add other orchard fruits too – pears, plums, cherries, quinces, or mulberries for instance.

Find out about fruit growers near you. Some have farm shops and some allow you to pick fruit straight from the tree.





Apple Day

You can celebrate the apple harvest in lots of ways – eating, cooking or juicing apples for instance. Many organisations and schools hold some kind of **Apple Day** event.

At Stanmer Park near Brighton, an Apple Day is held towards the end of September. You can visit a beautiful old orchard, see all the Sussex apples, make juice on a traditional press, play apple games and eat apple cakes!

There are sometimes apple songs and apple dances too...



About this book

Our Apple Orchards was produced by Action in rural Sussex and Brighton Permaculture Trust to encourage children to grow, eat and enjoy local fruit. In recent years we have worked with over one thousand children. Together we have planted orchards, often with rare Sussex apple varieties, cooked and juiced apples in schools, housing estates, parks and village recreation grounds across Sussex.

For more information on apples and orchards, courses and events, apple varieties and advice on fruit growing, markets and outlets for local fruit, visit:

www.brightonpermaculture.org.uk

www.orangeippin.com

www.orchardnetwork.org.uk

www.commonground.org.uk

www.ruralsussex.org

For insights into our local Sussex orchard history and possible future, look out for: *Sussex Apples and Orchards* by Brian Short *et al* (publication 2012).



Acknowledgements

We would like to thank Robin van Creveld for the recipes www.communitychef.org.uk, Caroline Zoob for her embroidery of apple pickers, Sussex Wildlife Trust, the People's Trust for Endangered Species, Paul Brock, and John Webley for the wildlife images, Caroline Arber for the pruning photos, the Victoria and Albert Museum for the apples in art, and all the children and young people who appear on these pages and all the many more we have worked and played with and have inspired us to make this book.

Designed by Wordsmith Design

Printed on Revive 100% recycled paper

This book is a great introduction to apples and orchards. It will make you want to plant apple trees, eat apples, cook apples, make apple juice and maybe even make apple monsters or an apple embroidery...

It features:

- apple trees through the seasons
- Sussex apple varieties
- orchard wildlife
- apple recipes
- apples in art and design

