COUNTRYSIDE STEWARDSHIP SCHEME EDUCATIONAL ACCESS

CHURCH FARM INFORMATION PACK



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A - Introduction



Words alone cannot describe the beauty, tranquillity and the history of this secret valley in Devon. On the site of a Domesday Manor there has been a great house in Haccombe valley for more than a thousand years. And the elegant former Georgian coach house of Church Farm is like no other. Set amidst 40 acres of rolling parkland with ancient woods, flower filled meadows, ponds, stream and tumbling waterfall, it is totally secluded from the hustle of everyday life, yet easily accessible by road, rail or air.

Now the home of a distinguished BBC wildlife television producer, the valley and its wildlife continue to feature in many of the country's most popular wildlife programmes. Much of the long running BBC series 'Secret Nature' was filmed in the countryside surrounding Newton Abbot. More recently many of the plants and animals featured in the hugely popular Natural World documentary 'The Farm That Time Forgot', were filmed at Church Farm. Here buzzards still wheel lazily overhead by day and barn owls haunt the evening meadows. Deer forage in the early morning and badgers come to the house after dark. This is a private natural paradise that you can now share.

The setting of Haccombe is described by the 19th century Devon chronicler, Baring-Gould, as one of "*exquisite beauty*". He wrote of "*the little combes that dip into the estuary of the Teign, rich with vegetation growing rank out of the red soil, as very lovely*". This is Haccombe.

Haccombe highlights of Church Farm

Wildlife all year round An exquisite little 13th century crusader church – open to visitors Wednesday afternoon The site of a Domesday manor The mystery of the vanishing village and ancient chantry college Seat of one of England's oldest families linked to some famous historical events Ancient deer park with many magnificent old trees Picturesque waterfall on the site of a medieval mill Medieval mill pond and stream The inspiration for the first illustrated flora of Britain. The home of an award winning BBC wildlife filmmaker The setting for internationally screened wildlife films

B - SITE MAPS

- 1. Directions to find Church Farm
- 2. 16th Century map of Haccombe valley on skin
- 3. Farm plan

For a full information pack including site directions and a farm plan, please contact Church Farm to arrange a school or group visit.



C - HACCOMBE – a thousand year history.

For over a thousand years a great house has dominated the ancient valley of Haccombe in South Devon. For centuries it was the home of the Carew Family. Of all the counties in England none is richer in historic family names than Devon. Its landowners, though never spectacularly wealthy, have always enjoyed a reputation of sturdy stock, deeply poted in the richest of soils. Since Elizabethan times the notable families of Devon, such as Drake and Raleigh, have featured large in English history. Even older, the Carews of Haccombe, baronets since 1661, have the rare distinction of a pedigree that can be traced unbroken back to the Norman Conquest. It was shortly after the Domesday survey that the estate was given to Stephen, probably a soldier in William's army.

The name Haccombe may be derived from the Saxon HORGE, a hedge, and COOMBE, a vale, meaning 'the enclosed valley'. Alternatively it could have come from the Anglo-Saxon OEC, an oak, meaning 'valley of oaks'. Haccombe is mentioned in the Domesday Book of 1086 when the land was valued at twenty shillings, and held six cattle, eight pigs, forty sheep, thirty goats and included two acres of meadow.

The entry for Haccombe in the Domesday Book

Stephen holds Haccombe from Baldwin. Ulf held it before 1066. It paid tax for ¹/hide. Land for 5 ploughs. In lordship 1 plough; 3 slaves; 1 virgate. 8 villagers and 4 smallholdings with 3 ploughs and 1 virgate. Meadow, 2 acres; underwood, 4 furlongs. 6 cattle; 8 pigs; 40 sheep; 30 goats. Value formerly and now 20s.

(Baldwin was the Sheriff of Devon. Ulf, a Saxon. And a virgate is an old English measure of land.)

In 1233 the church of St Blaise was built just a stone's throw from the original Manor House. It was founded by Sir Stephen de Haccombe, a crusader knight, on his safe return from the Holy Land. Enlarged two generations later, by his grandson in 1328, it contains the marble monuments and effigies of several of the family's ancestors. The single bell, cast about 1290, is thought to be the oldest in Devon and one of the oldest surviving in situ in Britain.

The Parish of Haccombe-with-Combe in which the church resides, also has the distinction of being one of the smallest in England. It now has just 500 parishioners, although evidence suggests it was probably larger in previous centuries. An old map drawn on skin clearly shows a nearby village long since gone. Just as intriguing is the ancient endowment by the church's founding family of an Archpresbytery supporting a collegiate college and several Chaplains. The Haccombe Chantry College flourished until its dissolution under Henry VIII's Reformation, when its endowment was forfeited by the Crown. By 1545 the college no longer existed and now all evidence of its site is lost. But to this day the principle and rare office of Archpriest is maintained with all its claimed

privileges and quaint rights - the wearing of a distinctive vestment, an amice of fur, and, more impressive, the right to sit beside the Bishop at ceremonies and recognise no authority lower than the Archbishop of Canterbury. In 1913 King George V reaffirmed the title of Archpriest of Haccombe and all its privileges.

There have probably been several substantial properties on the site of Haccombe House over the last millennia. And people undoubtedly lived here long before that. The finding of a finely crafted flint arrowhead suggests this secret valley was discovered back in prehistoric times. Haccombe is a sheltered and secluded valley with a little stream to provide water and enough power to grind corn. By the time of the Norman conquest the land was owned by a Saxon called Ulf. After it was given to Stephen de Haccombe. The Carews are descended from him, although three times the estate passed through a daughter as there was no son. And this brought a few problems.

In the 14th century Sir John L'Ercedekne was evidently not above a little cattle and deer rustling. Then in 1344 he appears as the leader of 'a huge multitude of evildoers', who robbed the Black Prince of his Cornish tin and even began house breaking. A certain John Cole obtained a judgement against him and claimed damages of an astonishing £1000. So Sir John was declared an outlaw. To avoid punishment he apparently joined the army in France, where he no doubt fought at Crecy, as shortly after the battle the King granted him a pardon for his good services. However, it did not last for long. As soon as he arrived home he was soon outlawed again. For a few years nothing more is heard of his misdeeds. Perhaps the ravages of the Black Death in the surrounding districts put the fear of god into him. But again it did not last long. Sir John was finally arrested and imprisoned at Launceston Castle, from where he escaped. Despite this he was pardoned once more by the Black Prince in 1352, for 'all felonies and outlawries and breaking the King's prison'. He died, peacefully, in 1377 well over the age of seventy.

The family continued to survive and flourish. The Tudor house built on the site was eventually replaced in the 1660's by one of the "finest houses in all of Devon", and then eventually a century later, by the present day mansion. The addition of a substantial coach house and stables in Georgian times, possibly based on the site of a much older building, and a home farm, added to the status of an already wealthy estate. In 1942 the property sold by Sir Thomas Carew came on the market for the first time in a thousand years or more.

Church Farm was then bought and run as a 200 acre dairy farm until late 1987, when it became a private home. Farming continued on the surrounding land, raising beef cattle and sheep, with a few fields of barley to feed some pigs. In 1993 Church Farm became the home of the Cooper family, including Samson, a boisterous but friendly chocolate Labrador. Andrew Cooper is a BBC wildlife film producer who, besides filming in some of the world's most spectacular and remote wilderness areas, has extensively featured the natural history of Britain in his programmes, particularly his home county of Devon.

The land surrounding Church Farm is today being farmed less intensively to benefit wildlife. Now with the support of the Country Stewardship scheme, cattle still graze the

fields and the main crop is a flower rich harvest of hay. The growing of some spring barley provides additional feeding grounds for one of Britain's rarest birds – the cirl bunting. Up to eight pairs of nesting swallows also breed around the farm buildings along with a pair of resident barn owls and kestrels. Early in the year thousands of wild primroses paint one of the steepest slopes and fringe the fields. While in the woodlands bluebell and wild garlic carpet the floor before the leafy canopy above casts its summer shade.



Today roe deer are as common in the valley as they no doubt always were. The old 16th Century map shows a deer park was established over much of what is now Church Farm. Most deer parks date from the late middle ages, and Haccombe is probably no exception. Keeping deer close to a grand house, often a herd of fallow deer,

was both fashionable and practical - picturesque and a ready source of meat. Remnants of the old deer leap, designed to allow deer to enter but not easily escape, can still be seen at the top of Kitchen Ball Copse.

But this is not a farm that just dwells in its romantic past. The introduction of remotely controlled, high resolution cameras now allows you to visit at any time, from anywhere in the world. The website - www.wildlink.org - features some of the farm's resident creature.

HACCOMBE HISTORICAL EVENTS

- 1086 Domesday Book records Haccombe owned by Saxon, Ulf. Now held by Baldwin, Sheriff of Devon, later given to Stephen, probably a soldier in William's army.
- 1200 Stephen de Haccombe born (son of Jordan).
- 1228 Stephen leaves for Crusade to Holy Lands with Bishop Briewere of Exeter.
- 1233 Sir Stephen returns to Haccombe and builds church.
- 1243 Sir Stephen de Haccombe dies.
- c.1290 St Blaise Church bell cast.

Sir Stephen's daughter Cecilia marries Sir John L'Ercedekne.

- 1335 Haccombe Chantry College established with five priests and archpriest.
- 1337 College reconfirmed in deed of foundation lodged in Exeter Cathedral library.

Cecilia and Sir John's son, Sir Warren L'Ercedekne, becomes Archdeacon of Haccombe.

- c1408 Sir Warren's daughter, Phillipa, marries Sir Hugh Courtnye, son of Earl of Devon.
- c1430 Their daughter, Jane, marries Sir Nicholas Carew (descended from the Carews of Wales, seat Carew Castle).
- 1485 Sir Edmund knighted Baron Carew of Mohun Antrie on Bosworth field.
- c1540 Haccombe College of priests disbanded.
- 1545 Vice-Admiral Sir George Carew drowned in the Mary Rose.
- c1560 Engraved picture window for Haccombe House made in Flanders.
- 1627 Horseshoes nailed on Church door.
- 1660 Elizabethan manor demolished, new house built. (After restoration of monarchy).
- 1661 Thomas Carew made a Baronet.
- 1688 William III (of Orange) lands at Brixham with army, on reaching Newton Abbot he declares himself the new King and stays at nearby Forde House.
- 1760 Chancel floor in Church relaid.
- 1777 Sir Thomas Carew marries Jane Smallwood.
- 1778 Haccombe House rebuilt.
- 1785 New coach house and stables built.
- 1795 Rev. John Sweete illustrates house and church in watercolour paintings July

NW wing added to Haccombe House.

- c1810 Crypt constructed beneath church and knave floor remade.
- 1822 New screen, pulpit and reredos added to church.
- c1848 NE wing of house built, (NW wing partly demolished).
- 1919 Old granite cross set up in churchyard as memorial and Rev. William. Keeble Martin returns to Devon.
- 1942 Haccombe estate comes on the market for the first time in over a thousand years.

THE FARM – AN UNNATURAL HISTORY

Many millennia ago a stone age hunter roaming this valley fired and lost an arrow. Layer by layer the vegetation and soil level grew. The wooden shaft and feather flights rotted away in the dark. The world hurried by. Great oaks grew and fell. Civilisations came and crumbled. Then one day, over six thousand years later, a tractor pulling a plough threw the arrowhead back into the sunlight. The finding of that finely worked flint at Church Farm is tangible evidence of the people that lived around here long ago. But then that is hardly surprising. Just four miles away, at Wellswood in Torquay, the discovery of one of the most significant prehistoric human finds in Britain was made at Kents Cavem in the late 1800s. Here, among the bones of long extinct animals, many stone age implements have been discovered, along with the hearths of fires lit by the people that made them. The cave also yielded the remains of great mammoth and woolly rhinoceros, sabre-tooth tiger and cave lion, hyaena, bear and wolf. The finds provide an extraordinary insight to the creatures that our ancestors may have shared this land with over thousands of years, and a way of life we can only try to imagination.

The densely wooded land that covered the British Isles must have presented a real challenge to the first stone age farmers. It was these people that set a cycle of changes into motion throughout this forested wilderness - a wildwood still in the process of forming as the climate warmed in the aftermath of the last Ice Age.

As for farming during the **Stone age**, 6,000 years ago, little is known about the nature of the earliest clearings that formed the first fields. However, we do know that the landscape, once dominated by deciduous woodland, slowly changed until the area of clearings, fields and pastures, probably equalled that of the woods. Throughout South Devon a scattering of flint implements of this period have been found and there also is evidence of an early open hilltop settlement on Haldon Ridge, at Haldon Belverdere, looking out over the present day lower Exe valley.

The people of the **Bronze Age** (2800-600BC) left many more signs of their living. Seen from the air, evidence of their field systems still carpet large areas of the South Devon countryside. Today they survive best of all in the upland, despite their abandonment over 3000 years ago. Dartmoor is rich in Bronze Age artefacts. Here the pattern of land use was a network of small fields laid out in parallel patterns on the sides of valleys with the upper moors serving as common grazing. There is even evidence of similar field patterns to be found around the Newton Abbot area. Though much has been lost in the fertile lowlands and valleys through subsequent farming activities and river deposits. Bronze age people also constructed burial mounds on remote high open land. Many such tumuli are to found on Dartmoor but others have been found much closer to Haccombe. On the high ground of Little Haldon, just to the north of the Teign estuary, Bronze age mounds are still evident.

The clearance of the original wildwood and expansion of field systems continued throughout the Bronze age and into the **Iron age** (600BC - 55AD). Throughout this

period many field systems were reinforced with banks and ditches, and substantial hill forts began to appear. On Milber down, to the west of Haccombe the St. Marychurch Road, probably an ancient ridgeway, runs right through the middle of a series of well preserved earthworks.

When the Romans arrived in Britain (55 - 400AD) the existing field patterns largely survived. In some places they were transacted by the invaders characteristically straight military roads. A Roman road ran from their fortress of Exeter, south west to Ashcombe where it branched west to cross the river at Teignbridge and east to a crossing below Kingsteignton and perhaps a fort at Milber. Crop marks suggest that there were some Roman villas near these roads.

During the subsequent **Dark ages** (400 - 700AD), there was little further development of the surrounding country except for the establishment of churches and monastic communities.

The **Anglo-Saxon** (700-1068AD) period saw the creation of parishes centred on churches. And the establishment of open-field strip farming began to grow around the first two centuries of this time. It is thought that a rise in population and shortage of pasture led to a more intensive use of farmland, along with the characteristic ridge and furrow pattern of Saxon ploughing. Many examples of which survive in the valleys surrounding Haccombe.

In other places a pattern of small irregular fields were established, surrounded by steep hedgebanks, which were often faced with stone. A complex network of narrow lanes following these hedgelines, were created to link the growing number of scattered farmsteads. Many of the deep lanes for which Devon is so famous date from this period.

By the time of the Norman invasion Haccombe was a bustling little community with a population of some 60 people, bigger than any of the nearby villages.

Late **Medieval times** (1068 – 1540AD) witnessed great expansion and developments of settlements and industry. Several planned towns were developed locally, including Newton Abbot, by the major landowners of the area, such as Torre Abbey and the Earls of Devon. They also developed licensed markets for the increasing trade in livestock and farm produce. Wool became an important industry in Haccombe and the surrounding areas. It was also during this time that the new Norman passion for hunting saw many deer parks established on some of South Devon's great estates.

The cool spring that flows from the upper valley at Church Farm provided the inhabitants of Haccombe with a vital source of pure water though the centuries. It also provided power. At some time the building of two ponds and the diversion of the stream into a leat, enabled the flow to be managed to power two mills. One mill stood where the present day waterfall now tumbles, and the other adjacent to Haccombe House.

In the **Post Medieval period** (1540 - 1750AD) the network of roads improved and bridges were built to facilitate trade among the growing settlements. It was also during this time that most of the deer parks were redesigned to form landscaped parkland around the wealthiest country houses.

Early modern times (1750 - 1900AD) began with the agricultural revolution. The improved breeding of livestock and intensification of crop production in larger regular fields began a process of great change in the British countryside. With the coming of the railways and further improvements in roads, the towns expanded with the rise in local industries such as the mining of clay.

Modern times have witnessed the most dramatic changes in our landscape. Since the end of the First World War the planting of vast tracts of coniferous forests significantly altered the countryside of South Devon. The building of motorways allowed greater ease of movement for people, especially for leisure, and the holiday industry expanded to cater for the growing demand. Many areas of farmland were converted into caravan parks and golf courses.

Since 1945 changes in agriculture continued at almost reckless pace. Increasing machinery size needed wider gates. And bigger tractors need bigger fields. At its peak of destruction over ten thousand miles of hedgerows were destroyed each year across Britain. Even Devon was not immune. But thankfully rolling hills and steep sided valleys are not really suitable for intensive arable production. Many areas have, so far, escaped relatively unscathed. Yet new crops, such as the vivid yellow flower of oil seed rape, the pale blue linseed and fields of maize and sunflowers are appearing, while old orchards have steadily declined. Once Haccombe and the surrounding valleys used to herald the approach of summer with swathes of apple blossom, for this was traditional cider country.

So Haccombe and the surrounding landscape of Teignbridge in South Devon, is rich in the remains of earlier lives. Over thousands of years our ancestors shaped the British countryside, leaving a legacy of farming that brought with it countless wild animals and plants. A nature that still survives along with medieval field patterns, historic houses, and ancient woodlands. These features make our landscape one of the richest and most varied on earth. In Devon they are all linked by steep hedge banks, coloured in wild flowers, that wind their way through centuries old sunken lanes.

BRITAIN – a history of change		REST OF THE WORLD
End of the ice age, tundra with pine and birch forest in the south.	c.9700BC	Cultivated crops grown in Thailand.
Broad leaved trees spreading north.	c.8000BC	Wheat cultivated in Middle East and domesticated animals found in first farming settlements.
Britain still part of mainland Europe inhabited by nomadic stone age hunters.	c.6700BC	Evidence of 14 different crops grown in southern Turkey.
Warming climate and rising sea levels. Vast forests and Britain becomes an island.	c.6000BC	Beginning of rice growing in the east.
Farming begins in Neolithic Britain.	c.4000BC	Wheel used in Mespotamia.
Elm tree decline perhaps linked to forest clearance.	c.3000BC	Plough being used in Middle East.
Lynx probably extinct	c.2700BC	Age of pyramids in Egypt begins.
Wessex culture develops in Bronze Age Britain. Avebury and Stonehenge built.	c.2000BC	Minoan and Mycenean civilisations build in Crete and Greece.
Large scale land clearance makes major inroads into ancient wildwood.	c.1500BC	Egyptians harness oxen to the plough.
Hill top settlements built in the south of country.	c.1300BC	Hittite civilisation in Mespotamia discover iro smelting.
Celtic people invade.	c.1000BC	The siege of Troy.
The iron age reaches Britain and hill forts massively reinforced.	c.500BC	Greek and Phonecian civilisations colonis Mediterranean.
Auroch probably extinct in England and Wales.	c.300BC	Roman Empire expands.
Belgic immigration begins and introduces heavy oxen-pulled plough.	c.120BC	House mouse probably spread across Europe.
	c.AD30	Jesus crucified and Christianity founded.
Roman invasion of Britain. Large areas of southern England under cultivation with a population approaching half a million people.	43	British wheat being exported to France.
Main withdra wal of Roman troops begin.	383	Mayan civilisation begins in Central America.
Angles, Saxons and Jutes establish settlements.	c.400	Rome sacked.

Auroch probably finally extinct in Scotland and Brown bear extinct in Britain.	c.1000	Black rat spreads from continent into Britain.
Norman conquest.	1066	Greenland Vikings reach North America
Domesday survey. Population of Britain around one million.	1086	
Beaver extinct.	c.1100	First crusade.
First record of rabbit in British Isles.	1176	
Land enclosures begin.	1235	
Population of Britain grown to nearly four million people.	1347	Black death spreads across Europe.
Black death spreads to England destroying entire villages and killing up to half the population. Many fields revert to woodland.	1348	
Sheep farming reaches its peak in 15thC. with perhaps 12 million animals. Wolf probably extinct in England.	1492	Columbus reaches America.
Wild boar probably already extinct. Population of Britain recovers to nearly four million again.	1620	Mayflower sails from Plymouth. Puritans settle in New England.
The Great Plague.	1665	
Brown rat arrives.	c.1728	Jethro Tull the agricultural machine inventor travels the continent for ideas to improve British farming.
Wolf finally extinct.	1743	
Large scale enclosure of farmland begins. Hedgerows and boundary banks already widespread in Devon.	1760	
Harvest mouse first described by Gilbert White.	1785	
Grey squirrel widely introduced. Red squirrel declines.	c.1900	
Farm labour reduced by war.	1914	Outbreak of World War I.
Vast areas turned over to crop production and many permanent pastures ploughed.	1939	Outbreak of World War II.
Increasing mechanisation and introduction of chemical pesticides on farmland.	1945	End of WWII

D - CHURCH FARM - A NATURAL HISTORY

A separate species list for present day fauna and flora is also available.

Rocks of ages

The soil of Church Farm is rich and red, a fine and fertile loam with sand and clay. Geologically the rocks and sediments of the area range over a vast period of time. If we were to journey through the millennia we would not recognise the place we now call Devon. It spans from the 360 million year old Devonian strata, when much of the region was submerged beneath ancient seas, to the still shifting sands and alluvial deposits of the estuaries and coast, around 6,000 years ago, when the English Channel was finally formed.

The oldest rocks in the area were named after the county - Devonian. Then the area that was to become Haccombe was a warm shallow sea littered with coral banks. These seas continued well into the **Carboniferous period** - the great age of the earliest forests on dry land.

Haccombe lies on a deep deposit of breccia, a mix of sand and stone, formed during the **Permian and Triassic periods** that began over 280 million years ago. This was a time of great upheaval in Devon, when mountains up to 3000 metres high were formed. The new land was then weathered by a harsh, arid sub-tropical climate, periodically lashed by violent storms that swept vast amounts of sediments into the valleys. This created thick deposits of wind blown material and course breccia, while sandstones were laid down by flash floods and impermanent rivers. The arid climate caused the iron compounds in these sandstones to be deposited as iron oxides. And that coloured these new sandstones red. The landscape here at that time, when early dinosaurs were beginning to roam the earth, would have painted a desolate scene. Erupting volcanoes belched their sulphur-laden dust into the air just 20 miles to the north, around present day Exeter. The rain-washed deposits of Teignmouth and Oddicombe breccia at Haccombe also contain eroded **Devonian** limestone full of marine fossils – delicate corals and many shells can be found embedded in the boulders.

During the great age of dinosaurs, in the **Jurrasic period**, that began 213 million years ago, most of Devon was once again flooded by a shallow sea, except for the south of the county which remained as dry land. So here there are no sedimentary rocks dating from that time. But by the **Cretaceous**, 70 million years later, Devon was again being submerged beneath a deepening sea. Sand and clays were the first layers to settle, followed by chalk as the depths increased.

The start of the **Tertiary period**, 65 million years ago, saw Devon rise out of the Cretaceous sea in a new age of mountain building. The exposed chalk beds soon weathered away to leave large expanses of flint and gravel, as seen on the high grounds of Haldon to the north of Church Farm.

One of the most significant features of Devon occurred around 30 million years ago. A fault in the underlying rocks of the region, ran from Bideford in the North to Torbay in the south. It resulted in the formation of the low-lying Bovey basin. Here huge deposits of what was to become some of the world's finest clays began to settle in a large lake.

Time continued to pass as a succession of new beasts roamed the earth. For at least two million years the **Ice Ages** came and went. Temperatures soared and dropped. Sea levels rose and fell. During the coldest times the great ice sheets that lay so heavy on the rest of Britain, never covered Devon. But the freezing conditions and subsequent melting, carved and created the underlying landscape of today.

Climate

Mild rain bearing winds of the Atlantic Ocean sweep in over the south west of England, bringing a pleasant climate to the region. In some places even better than others. Between the estuaries of the Teign and Exe this mild maritime influence is carried well inland. While western hills tend to be windier and wetter, the lee valleys are often warm and dry. Church Farm is fortunate being situated in the one of the county's warmest parts with just enough rain to keep the land lush.

Wildlife



The wildlife of Church Farm has a special claim to fame. Between the first and second world wars many species of plants were painted by the then Archpriest of Haccombe, the Rev. William Keble Martin, to illustrate his exquisitely detailed life's work - The Concise British Flora in Colour. He described the valley as having "a riot of wild flowers and abundance of hares". More recently millions of people across Britain and many more overseas, have enjoyed the plants and animals featured in the award winning BBC wildlife documentaries filmed at Church Farm. (See Section E)

The nature of Haccombe valley can be traced back to before people lived here. Some plants act as indicator species for ancient habitats, such as Dogs mercury or Bluebell for ancient woodland. Hitch Bere Copse is without doubt a very old wood. Its name probably derives from the old English, *bearu*, meaning a wood. It also appears on the 16th map of Haccombe, which also includes an area called Frye Park, perhaps a corruption of *fyrhp*, another old English word for woodland. For several weeks from the end of April, its floor is awash with bluebells and wild garlic. Most of the farm was once a deer park with only few hedgerows. So the planting and regeneration of existing field boundaries is creating new nesting areas for many wild birds.

Some of the hillside meadows are not suitable for ploughing, even by modern tractors. Consequently they have never received any artificial fertilisers, to the benefit of the many wild flowers that thrive here. Beneath the shelter of several great old Sweet Chestnut trees on this east facing slope, a few oaks and a magnificent solitary variegated sycamore, the field is a blaze of yellow primroses in spring.

Later as the weather warms a succession of colourful flowers fill the meadow. They in turn attract many butterflies and other insects. But butterflies need more than just nectar. These colourful creatures seek out suitable plants on which to lay their eggs. When the caterpillars hatch they are already sitting on their first meal. The meadow flowers include – knapweed and



bird's foot trefoil. While the most eye catching butterfly must be the marbled white.

The varying soil conditions around the farm support different communities of plants and animals. Along the lane leading to the woods the most common wild flowers are vetches, agrimony and scabious. But to see one of the weirdest creatures here you will have to wait until after dark. It is then that strange lights glow in the grass. Glow worms seem to thrive here. They are extraordinary creatures. Not a worm but a beetle. The young larval glow-worms feed on snails. The adult female is flightless, so in order to attract a mate she emits a cold chemical light from he end of her abdomen.. The flying males, attracted by her light, home in on the females hiding in the grass. But glow-worms are not as common as they once were. Elsewhere, the use of pesticide sprays and the introduction of artificial lighting into the countryside, even a house light, can distract the male insect. So many a male glow worm these days are sadly attracted by brighter city lights.

The management of pasture and hay meadows has produced a thriving population of field voles. Easily identified by its short tail and blunt nose, they leave a network of feeding trails in the grass. Unfortunately for the field vole they also come high on the menu for many other creatures. Fox, stoat and weasel will all feed on voles. So too will birds of prey. The resident barn owl and kestrel probably take the biggest share, but even the buzzard is not above catching a few when rabbit numbers are low.



Barn owls have good eyesight but hunt principally by sound after dark. Their flight is silent and they can detect the slightest rustle at fifty paces. Although barn owl sometime hunt in evening and early morning light, it is the kestrel that dominates the day shift. We have all seen kestrels expertly hovering, scanning the ground for the tiniest movement. Field voles mark their territory by leaving a trail of urine along their tracks. This smelly signpost to other voles is all but invisible, except it reflects ultra violet light, invisible to our eyes. Unfortunately for voles the kestrel has a secret weapon in their formidable talent as a hunter. Not only is their eyesight

incredibly acute but they can also see UV light. Finding the freshest trails, the bird will either sit on a handy post or hover and wait for a passing meal. But it is not all one sided,

voles breed prolifically in long grass and they can move like lightening into the safety of their underground nests if danger threatens.

Other birds that may commonly be seen in summer at Church Farm include the sparrowhawk, swallow, grey wagtail and even shelduck nesting in rabbit holes around the pond. Even the magnificent peregrine is a regular summer visitor. But the cirl bunting is by far the rarest. Most of the British population of these attractive sparrow sized birds, can today only be found along the south Devon coast. The cirl bunting, pronouncing the 'c' as an 's', was first named in Italy. Its name literally means the 'plump chirping bird'!

Before the Second World War cirl buntings were to be found across southern England, and even into Wales. Since then the intensive way our food began to be grown, dramatically changed the fortunes of this bird and many others. Gone were the small self sufficient farms with a patchwork of arable fields and pasture, ideal for the cirl bunting's diet of small weed seeds and grasshoppers for their young. By the late 1980's only 118 pairs could be found, mainly between Exeter and Plymouth. The key to their survival in this area was found to be the continued growing of spring barley. When harvested in the Autumn the stubble fields, full of small weeds, were left untouched over winter. Much to the benefit of the few surviving buntings.

Today the Countryside Stewardship Scheme, in conjunction with the RSPB, actively encourages farmers in South Devon to manage their land to benefit cirl buntings. The growing of spring barley and maintaining of thick hedgerows provides them with places to feed and nest. So far the scheme has proved a great success and the 'plump chirping bird' is once again returning to our fields in bigger numbers.

More information about the cirl bunting is available along with an RSPB school information guide to one of Devon's special birds.

Larger mammals are also to be seen on the farm. Wild roe deer enjoy the undisturbed seclusion of the valley year round and give birth here every summer. Adults and young can be seen foraging along the woodland edge in the low, early morning and evening sun. Even the badger, normally a nocturnal creature can be sometimes seen in the early evening.

Our website, <u>www.wildlink.org</u>, specially dedicated to the wildlife of Church Farm, carries pictures from live cameras throughout the year. The fortunes of the barn owls, kestrels and even a family of badgers can easily be followed from your home or school.

Old estates often have many magnificent specimen trees. Church farm is no exception. There are some superb great trees of small leaved lime, oak, walnut, ash, sweet chestnut and horse chestnut. The measurement of their girth, taking into account where they are growing can provide a good guide to their age. Also a few fallen trees have been cut to reveal the growth rings.

SECTION E

THE CONCISE BRITISH FLORA IN COLOUR BY W. KEBLE MARTIN

With a Foreword by H.R.H. THE DUKE OF EDINBURGH

The Concise British Flora in Colour

W. KEBLE MARTIN - 1486 SPECIES ILLUSTRATED



This best-selling book was first published in May 1965. It is the most beautiful of all books on the flora of Britain, an extraordinary achievement that took no less than sixty years of meticulous and devoted study. intensive research. note-making and draughtsmanship. Of exquisite the thousands of species described so precisely in the text, nearly 1400 are depicted in full colour, which are all more remarkable the for their precision of detail. With additional illustrations in black and white, a comprehensive glossary and а complete index - the nomenclature edited by Douglas H. Kent - this was a major contribution to botanical study and illustration. It combined the sheer beauty of artistic skill with down to earth botanical accuracy. As а reference work of identification to be used by botanists and students, it is still invaluable, and is likely to

become a classic study. As a work of art it delights all who appreciate the richness of the British Flora.

The Reverend William Keble Martin was born in 1877. During his schooldays at Marlborough he was an enthusiastic butterfly collector and botanist, reading Botany as a degree subject when he went up to Oxford. There in the Botanic Gardens students were trained to draw specimens as seen under the microscope and this habit of meticulous, detailed work is reflected in the exquisite illustrations in his book.

For some time William Keble Martin made his home in Dartington, near Totnes, where surrounded by extensive woodlands, meadows and water, it was an ideal situation for the study of birds, insects, mosses and flowers. After his ordination he worked for eighteen years as Curate or Vicar far from the rolling green hills of Devon, first in the industrial parishes of the north of England and then as a Chaplain to the Forces in France. The idea of the Flora was always close at hand, but there was little time to devote to it.

After the war he moved to Devon where, from different parishes including Haccombe, he was able to study different flora. But the years were busy and sometimes his own holiday, which he liked to spend on his research, had to be very short. After a busy Sunday in church he would often catch a late train from Newton Abbot station, sometimes travelling as far as Scotland. Following his explorations to mountain summits and remote glens, some of the flowers he discovered would be drawn in the jolting railway carriages during his long return journey south on Thursday – arriving in time to administer to his parish duties and write a sermon for Sunday.

William Keble Martin was a lively member of Botanical circles and was elected a Fellow of the Linnean Society in 1928. He edited a comprehensive Flora of Devon for the Devon Association in 1939 and was invited on to first Nature Reserves Committee. In 1949 he resigned his benefice at what he described as the early age of seventy-two, but continued to take temporary charge of occasional vacant parishes, usually spending six to twelve-months in each. This gave him some spare time to devote to the redrawing of a number of the floral plates.

Happily married for the second time in January 1965, and with The Concise British Flora being the "best-seller" of the year of its publication, he and his wife were kept busy with correspondence and callers. In June 1966 he received the honorary degree of Doctor of Science at Exeter University and in the following November he was asked by the Post Office to submit designs for an issue of wild flower stamps, four of which were accepted and issued in April 1967. Then, after a serious illness, he was able to complete the writing of his autobiography 'Over the Hills', which was published in the summer of 1968. The Rev. William Keble Martin died in November 1969.

F - Things to remember when visiting the countryside

a) Health and Safety

WORKING FARMS CAN BE DANGEROUS PLACES FOR CHILDREN AND ADULTS. FOLLOWING A FEW SENSIBLE PRECAUTIONS AND BEING AWARE OF ANY POTENTIAL HAZARDS WILL MAKE YOUR VISIT MORE ENJOYABLE.

PLEASE BE AWARE OF THE FOLLOWING:

- Electric fencing may be in operation do not touch
- The medieval mill pond is up to 2m deep with steep walled sides. The woodland spring pond is very muddy. Please do not wade in this pond. Both ponds are fenced.
- The stream can be fast flowing but is only knee deep in a few places. Please do not block or impede its progress flooding could result. Many sections of the stream are not fenced.
- **Cattle can be unpredictable**, especially young ones in a herd. They may be more curious about you than you are about them! Please avoid entering fields with livestock and keep all gates firmly closed.
- **Tractors and machinery** may occasionally be in use. Please keep well clear of all agricultural machines.
- A few plants and some fungi are potentially poisonous. Do not pick fungi, berries or fruits unless certain they are harmless. Others, like the common stinging nettle, can cause a painful rash, while the sap from the hogweed can burn the skin when subsequently exposed to sunlight.
- **Hygiene is important on the farm.** To reduce the chances of disease or distress to livestock please do not leave any litter or food that animals might consume even a short length of nylon string or a piece of wire can kill a cow.

b) General behaviour in the countryside

THE COUNTRY CODE

- 1. Enjoy the countryside and respect its life and work
- 2. Guard against all risk of fire
- 3. Fasten all gates
- 4. Keep your dogs under close control
- 5. Keep to public paths across farmland
- 6. Use gates and stiles to cross fences, hedges and walls
- 7. Leave livestock, crops and machinery alone
- 8. Take your litter home
- 9. Help to keep all water clean
- 10. Protect wildlife, plants and trees
- 11. Take special care on country roads
- 12. Make no unnecessary noise

ADDITIONAL CODE FOR CHURCH FARM

- Please do not disturb any nesting birds or pick any wild flowers as they may be part of a research project.
- Please do not trample any crops and if there is no footpath keep to the edge of all fields even grass is a crop and may be harvested as hay.
- Do not dam or impede the stream as flooding may result.
- There are several video cameras and film time lapse positions around the farm please do not touch.
- Take only pictures, leave only footprints.

c) Appropriate clothing and footwear

Please wear appropriate clothing and footwear. Farms can be muddy and wet even in apparently dry weather. Haccombe valley is sheltered from the worst of bad weather. But while it may be warm in the valley, the hillsides can be colder on windy days.

SECTION F - CHURCH FARM EDUCATIONAL ACTIVITIES

A few ideas for educational activities at Church Farm

1)	BIOLOGY AND ART	Name a plant, write a book Harry Potter knows his trees Hedge postcard How to be a wildlife filmmaker Become a nature detective
2)	ENGLISH LANGUAGE	Whose who in a hedge?
3)	GEOGRAPHY	The case for and against hedgerows How to create a medieval deer park
4)	DRAMA	Hedgerow communities
5)	HISTORY	Using a simple formula estimate the age of a hedge and /or tree and relate it to the historical events of the year it was planted.
6)	HEDGEROW GAMES	Hedgerow Bingo Food Web Game

1) **BIOLOGY and ART**

- 1. The Rev. William Keble Martin was an Archpriest of Haccombe in the 1920's. He was the author and artist of The Concise British Flora the first illustrated flora of Britain. How do you name a plant try and think up your own name for a wild flower and illustrate it.
- Find three special trees that featured in the Harry Potter stories. Draw a leaf and take a bark rubbing so you can recognise the tree again. Harry Potter had a magic wand made from which tree Holly His mother used a wand made of Willow And Hagrid owned one made from Oak
- 3. Look closely at a hedgerow or woodland edge. How many different colours can you see? Make a hedgerow or woodland colour palette*.

- 4. How to make a wildlife documentary for television a behind the scenes look at the cameras and specialist equipment from time lapse to miniature cameras.
- 5. Tracks and trails become an expert tracker. Find the trails made by deer and badger. Identify fox spraint and badger latrine. Identify which animal opened a hazel nut.

*Colour Palettes or Hedge Postcards.

Look closely at hedges how many different colours can you see in a hedge? Make a hedgerow colour palette, i.e. piece of card with a strip of double sided sticky tape across it. Give a palette to each child tell them to find as many different colours and shades as they can in the hedge. How many different shades of green can they find? Challenge them to find orange or blue, (usually difficult colours to find). Tell them to only pick small sections of leaves or a single petal without harming the plant. Should end up with a 'postcard/palette' with a variety of shades.

Could lead to discussions on the importance of various colours in nature.

2) ENGLISH LANGUAGE

Whose who in a hedge?

The object of this game is for each pupil to guess what animal they are by asking their fellow classmates a series of yes or no answers.

You will need enough blank stickers for your class and a pen. On each sticker write an animal, bird or insect that you would associate with a Devon hedgerow e.g. fox, dragonfly etc.

Firstly, explain to your class that they can only communicate to each other in yes or no questions. Then stick a sticker on the back of each pupil, they must find out what they are without asking a direct question.

Have 1 got fur? Do 1 fly? Do 1 eat snails?

When they know who they are they must explain to the teacher why they think they are that animal, insect etc.

3) **GEOGRAPHY**

The Case For and Against Hedgerows.

FOR	AGAINST
Hedges help to keep farm animals in or out	They require management, which takes time, skill and money.
Hedges give shelter to farm animals and protect crops from the weather.	
	On arable farms stockproof, hedges are no longer necessary so they are 'grubbed' up.
Hedges mark the boundary of fields and farms.	
Hedges provide food and shelter for wildlife	Hedges cast shade on the edge of fields slowing the growth of crops and drying out the soil in spring.
Hedges act as 'wildlife corridors' or 'green roads'.	
Hedges prevent soil erosion due to the weather	Hedges can harbour 'weeds' and pests such as blackfly that lives on spindle.
Hedges are attractive, Devon's landscape would be very different without them. And that would make the county less appealing to tourists.	Some of the birds that are attracted to hedgerows are seen as a nuisance, as they eat seeds, buds, fruit or foliage of crops from farms.
Hedges harbour useful creatures, some are	The roots from hedge plants use soil water
important pollinators or predators of crop pests The birds they attract may also eat unwanted field insects.	The roots from hedge plants use soil, water and nutrients which could be used by the crops or and grass growing in the field.
Hedges provide us with fruit, nuts and timber.	Hedges take up space which could be used for crop production.

Read carefully the above pros and cons of hedgerows, can you think of any more reasons why hedgerows are destroyed?

Despite the importance of hedges for agricultural, wildlife, historical and landscape reasons; hedges are still threatened they are:-

• **removed** to make bigger fields so that large machinery can move and turn more easily.

- **damaged** by hedge trimmers. Machines can be used to trim hedges quite neatly On other occasions young trees are damaged by careless operators using powerful flails.
- **threatened** by chemicals. Many farmers spray their crops with pesticides. Some of these chemicals land on hedges, killing many of the hedgerow mini-beasts and plants.

Hedge Condition

Examine a set of Devon Hedges and look for and record those that:-

- Have been laid within the last few years
- Have been kept trimmed to shape
- Are overgrown and have had no management within the last few years
- Have fallen derelict and developed gaps because of lack of management.
- What is the proportion of hedges in each condition?

Show your results in maps and tables.

4) DRAMA

Hedgerow Communities

Think about the relationships between the plants, animals and insects that live in the hedge. How do they survive together? How are they dependent on the soil, sun and rain? Give each child a role and let them act out life in a hedge. Throw various situations at them i.e. hedge cutting, drought, winter etc.

5) HISTORY

1. The Farm – an unnatural history – where did **barn** owls and swallows live before there were barns? What about **house** sparrows, **house** martins and **field** voles?

- 2. Become a Time Traveller take a walk on the wild side and travel through time from the last ice age to the present day from an ancient wildwood inhabited by wolves and bears to a present day farm.
- 3. How to recognise an ancient habitat
- 4. Dating a hedgerow*.
- 5. How old is that tree whose reign, and who was the prime minister when it was planted?.What other historical events happened that year?

*Dating a Hedgerow

A hedgerow can be dated roughly by counting the number of different trees and shrubs found in a 30 metre stretch. Each species of woody shrub represents 100 years. So if a section contained hawthorn, oak and hazel, the hedgerow would be about 300 years old. This calculation is based on the work of Dr Max Hooper et al. and is known as Hooper's Rule. It is surprisingly accurate except for the elm exception – see below.

For best accuracy it is best to avoid hedgerows adjacent to woods. Some trees are good indicators of very old hedgerows, because they will only grow when the hedge is thick enough to shelter particularly delicate saplings. Spindle and Field Maple will only grow if there are already at least four species well established. So if you find either of these trees in a hedge you can presume that it is at least over four hundred years old.

Woody shrubs present in 30 metre stretch	Approximate age of hedgerow	Historical period
Hawthorn, oak, blackthorn and elder.		
Blackthorn		
Hazel, oak, field maple, ash and holly		
Willow and hawthorn		

Now complete the table

Now find your own stretch of hedge and see if you can count the number of different trees and shrubs **n** 30 metres. Try relating the age of the hedge to some major events in history.

List of trees and shrubs for the purpose of hedge-dating

Alder Apple Ash Beech Blackthorn Briar Broom Buckthorn Cherry Cherry-plum Dogwood Elder Elm: wych English East Anglian Cornish etc Dutch, Huntindon * Furze/Gorse Guelder-rose Hawthorn: hedging woodland Hazel Holly Hornbeam Lime: ordinary small leaved (pry) Maple Oak: pedunculate Sessile * Pine Plum (including bullace) Poplar: aspen black white Privet (wild) Rowan Sallow Service Spindle Sycamore Wayfaring-tree Whitebeam Willow: crack White Yew

Alnus glutnosa Malus sylvestris Fraxinus excelsior Fagus sylvatica Prunus spinosa Rosa arvensis R. canina R. rubiginosa Sarothamnus scoparius Rhamnus cathartica Prunus avium P. cerasifera Cornus sanguinea Sambucus nigra Ulmus glabra U. procera U. minor U.stricta U. x hollandica Ulex europaeus Viburnum opulus Crataegus monogyna C. laevigata Corylus avellana *Ilex aquifolium* Carpinus betulus *Tilia x vulgaris* T. cordata *Acer campestre* Quercus robur *O. petraea* Pinus sylvestris Prunus domestica Populus tremula P. nigra P. alba *Ligustrum vulgare* Sorbus aucuparia Salix caprea S. cinerea Sorbus torminalis Euonymus europaeus Acer pseudoplatanus Viburnum lantana Sorbus aria Salix fragilis S. alba Taxus baccata

* Including hybrids

The elm exception!

It is worth noting that English elm is very invasive in a hedgerow, suckering profusely, and will out compete many other species of tree and shrub. So although elm may be the only tree present the hedge could be much older than 100 years.

Estimating The Age Of A Tree From Its Circumference

Tree Event	Circ.	Location	Age (est. years) Historical
Great Oak Walnut 2 Walnut 3	4.8m 2.3m 2.15m	Walnut tree field	192-287
Big Ash	2.13m 4.6m		368 (wood)
Lime 1 Lime 2 Horse chestnut	5.7m 5.5m 4.6m	Lime tree field	342 (avenue/wood edge)
Sweet chestnut	?	Steep field	?

6) HEDGEROW GAMES

Hedgerow Bingo

This game is played just like normal bingo, except that you need to guess the answer by listening carefully to the descriptive clues.

You will need to make up a number of different bingo cards and clues for each item, see below for example.

Oak	Blackberry	Glow worm
Brown Hairstreak	Primrose	Barn Owl
Snail	Hedgehog	Greater Horseshoe Bat

1. I am a tree, my leaves are bumpy and 1 have acorns.

2. I provide a tasty meal in the autumn for many birds, mammals and insects. You might eat me in jam with apple. I stain your fingers purple when you pick me.

3. I am a beetle, the male of which flies at night with a glowing behind.

4. I am Devon's special butterfly, which needs blackthorn to feed on.

5. I am a predator which feeds along hedgerows looking for voles and other small mammals. My feathers are very special as when I fly I don't make a sound. I have a friend called Hedwig.

6. I'm a slimy creature, whose shell helps protect me from harm. I'm a favourite food of the thrush and the French.

7. My name comes from the habitat your studying, but I'm not a pig as my name suggests

8. I fly at night and hunt along hedgerows for small insects. I need bushy hedgerows to find my way around as I use sonar which bounces of tall hedgerow trees.

The winner is the first person to get a line - "hedgerow" or to complete their card - "hedge".

Food Web Game

For this game you need a ball of string and a class. This game shows the interrelationships among all the members of the hedgerow. Ask your class to form a circle. Pick out the brightest most radiant pupil to play the sun.

The sun should stand in the middle of the circle, glowing brightly and holding the ball of string. The string represents energy/food.

Begin the game by asking your class what harnesses the energy from the sun to make food?

Answer - Plants.... that child is then given the ball of string (the sun still holding the end). Ask the child to think of a name of a plant found in a Devon hedgerow e.g. Primrose.

What might eat the primrose? Snail. Pass the ball on. What would eat the snail. Thrush. Pass the ball on and so on. Continue connecting your class with string until the relationship to the rest of the group emerges, carry on until all the children are strung together to form your very own hedgerow ecosystem – a food web!

To demonstrate how each individual is important to the whole community, take away one element of the food web e.g. all the insects are wiped out by accidental drift of pesticides onto the hedgerow. All the insects should let go of the string, those who feel their string become loose should also let go and so on, until the string has fallen to the floor, everyone is affected by the incident.

SECTION G – TEACHER RESOURCES

ORGANISATIONS

Devon Wildlife Trust Shirehampton House Exeter Tel. 01392 279244

British Trust for Conservation Volunteers 36 St Mary's Street Wallingford Oxfordshire OX3 7XG Tel. 01491 839646

British Trust for Conservation Volunteers can offer advice, tools or assistance if you want to get involved in practical conservation

English Nature Northminster House Peterborough Cambridgeshire PE1 1UA Tel. 01733 340345

Produce a number of useful publications

(FWAG) Farming and Wildlife Advisory Group National Agricultural Centre Stoneleigh Park Warwickshire CV8 2LZ

Food and Farming Information Service National Agricultural Centre Stoneleigh Park Warwickshire CV8 2LZ Tel. 01203 692969 ext.207 Can provide advice and a range of useful information on teaching resources.

(NFU) National Farmers Union Agriculture House 25-31 Knightsbridge London SW1X 7NJ

(RSPB local office) Royal Society for the Protection of Birds Southernhay Exeter Produce a catalogue outlining many publications showing how birds can be used as a teaching resource.

Soil Association Organic Food and Farming Centre 86 Colston Street Bristol BS1 5BB Tel. 0117 290661 This organisation produces resources that explain the links between soil, plants, animals and people.

APPENDIX 2

GENERAL BOOK RESOURCES

Exploring Our Environment

Field Studies Council Preston Mountford Montford Bridge Shrewsbury SY4 1HW Tel: 01743 850370

The Farming Industry – A pack for primary teachers NFU and Oxfordshire Education Business Parnership

First Nature – RSPB a programme of environmental education for 5-8 year olds.

School Grounds Resource Directory LTL Southgate Publishers Glebe House Church Street Crediton Devon EX17 2AF

Tel: 01363 777575

Secret Nature of the Countryside Andrew Cooper

Sharing Nature with Children Joseph Cornell

BOOKING FORM TO VISIT CHURCH FARM

Date:		
Name of school/group:		
Address:		
Telephone:		
e-mail:		
e-man.		
Name of contact person:		
I turne of contact person.		
Is this your first visit*:		
Date of visit:	Start time:	Finish time:
Number of children:	N	umber of adults:
Age range of children:		
Do any of the children ha	ive special needs	?:
If yes, please state:		
Please provide a briet ind	ication of which	activities you wish to pursue.:
For use by land owner		

Please return this form to Andrew and Jeanne Cooper, Church Farm. (address on front)

* If this is your first visit it may be necessary to arrange a visit before bringing your group.