

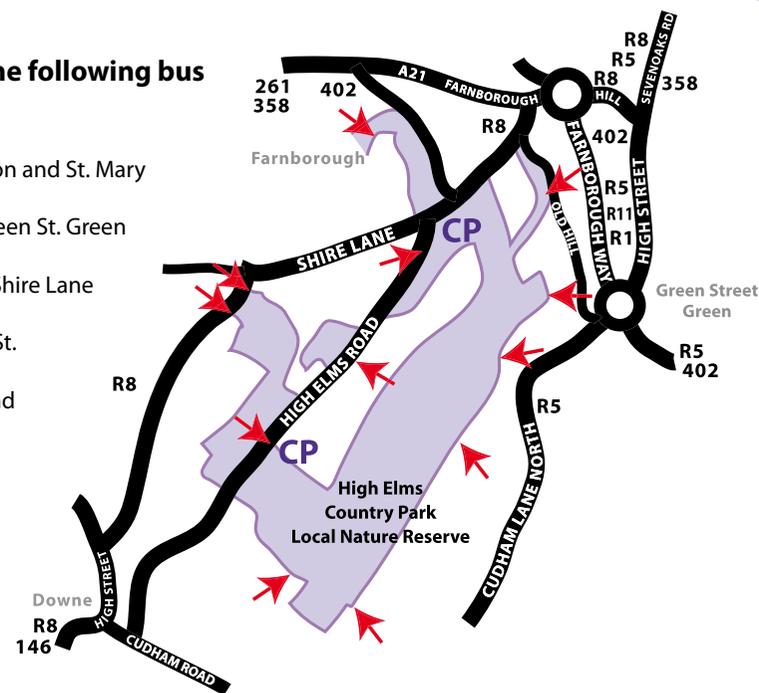
# High Elms Country Park Local Nature Reserve

## High Elms Trail

### How to Get There..

High Elms Country Park can be reached using the following bus routes:

- R1** Green St. Green to St. Paul's Cray via Chelsfield, Orpington and St. Mary Cray
- R5** (Mon-Sat) Petts Wood Stn to Halstead via Orpington, Green St. Green and Cudham/Pratts Bottom
- R8** (Mon-Sat) Orpington to Biggin Hill via Green St. Green, Shire Lane and Downe
- R11** Green St. Green to Sidcup via Orpington, St. Mary Cray, St. Paul's Cray and Footscray
- 146** (Mon-Sat) Bromley North Station to Downe via Hayes and Keston
- 261** Green St. Green to Lewisham via Farnborough, Bromley, Grove Park and Lee
- 358** Orpington to Crystal Palace via Green St. Green, Farnborough, Bromley, Eden Park, Beckenham, Penge and Anerley
- 402** (Mon-Sat) Bromley North to Tunbridge Wells via Farnborough, Green St. Green, Knockholt, Sevenoaks, Hildenborough and Tonbridge



**Trains:** Nearest Station: Orpington.

Correct at time of going to press. Latest information from Traveline: 020 7222 1234

### BEECHE (Bromley Environmental Education Centre at High Elms)

Whilst at High Elms, why not drop into the Visitor centre where there are walks leaflets, countryside information, interactive displays and ranger staff available to assist you.

Open weekends: 11.00am - 4.00pm and school holidays: Mon, Wed, Fri 1.30pm - 4.00pm.

Rooms available for hire on request. The Green Roof Cafe is open from 10am daily.

#### Bromley Countryside Service

For up to date information about Bromley's Countryside, including accessibility and nature trails, or if you are interested in High Elms Country Park and would like to become more involved in the Local Nature Reserve, contact Bromley Countryside Service on 01689 862815, email [countrysideandparks@bromley.gov.uk](mailto:countrysideandparks@bromley.gov.uk) or see [www.bromleybiodiversity.co.uk](http://www.bromleybiodiversity.co.uk).

**EMERGENCY PHONE: 020 8464 4848**



A Wildspace Project supported by English Nature and the New Opportunities Fund

The Wildspace Project Promotes Local Nature Reserves for Local People.



# What to see at High Elms

Much of the 200 acres of High Elms Country Park is a Site of Special Scientific Interest because the chalky soil supports species-rich grassland where rare orchids grow, and its ancient woodland is home to endangered dormice. Some of the plants and animals you will be able to see on the way around the nature trail indicated by posts, (tick the circles). Others may be anywhere in the park and are shown in some of the pictures opposite. How many can you spot?

Score: 10-20 Wild, 20-30 Amazing Animal, over 30 Dynamic Dormouse!



## Looking back to the past

William the Conqueror gave land here to Bishop Odo of Bayeux in 1067, and for centuries it was sheep grazed, but when ancient woodland was cleared for pasture, some was left for fuel and timber and some kept as hedgerows, now within woodland again. In 1808 the estate was sold to a banking family called Lubbock and in 1842 a new house was completed for John William Lubbock, a mathematician and astronomer. The same year Charles Darwin moved to nearby Downe and the two men became friends. Darwin persuaded Lubbock to buy his son, John, a microscope and as a teenager John did some illustrations for Darwin's books. He grew up to be a staunch Darwin supporter and published important work as an entomologist, archaeologist, and botanist as well as popularizing natural history and working in the family bank. He was also a social reformer, and on becoming a politician in 1870, introduced bills including the Bank Holiday Act (1871), the Wildbirds Protection Act (1880) and the Open Spaces Act (1896). He saved Avebury Stone Circle from developers and was created Lord Avebury in 1900. In 1938 High Elms was sold to Kent County Council; from 1943 some of it was leased to the Forestry Commission. In 1967 the mansion burnt down and in 1968 the London Borough of Bromley took over the estate.

## How to get around

High Elms Trail is marked by 20 numbered posts, banded in pale blue (see inside leaflet). It is about 3.5km (2<sup>1</sup>/<sub>4</sub>mls) long and may be muddy at times with steps as shown on the map and some gradients of >12%. High Elms Road has to be crossed in 2 places. Please follow the Country Code, keep to the footpaths and remove your dog waste. Horse riding and cycling allowed on bridleway only. Bromley Parks and Open Spaces By-laws apply.



**A John Lubbock (1834-1913): Fellow of the Royal Society (proposed by Charles Darwin).**



**B**

### SOME OF THE THINGS HE WORKED ON AT HIGH ELMS



**C**



**D**



**D**

**B Queen Yellow Meadow Ant** from his book, 'Ants, Bees and Wasps', which describes research into the lives of ants and observations of the same ant colonies which lived between sheets of glass for many years at High Elms.

**C Bee Orchid-** Lubbock researched the relationship of this plant's structure with insects.

**D Elephant Hawkmoth-** He wrote about caterpillar camouflage on their foodplants, willowherb.



**J**



**K**



**L**



**M**



**N**

### SEE HOW MANY DIFFERENT CONIFER TREES YOU CAN FIND

Conifer trees from around the world were planted by the Lubbock family in the parkland. How many different ones can you spot? The cones stay on the trees for a long time and are good clues.

**J Douglas Fir** from North America; note little bract scales showing between cone scales.

**K Wellingtonia:** Feel the thick spongy bark, fire resistant as it doesn't contain resin. May live to 3500 years old in its native California.

**L Coast Redwood (Sequoia).** Another Californian conifer, note similar bark. The tallest living thing on earth (may grow to 110m).

**M Cedar trees:** upright cones like candles break up on tree releasing winged seeds. Blue Atlas Cedar from North Africa grows along the driveway.

**N Corsican Pine:** tall, grey-barked tree near the car park.

### SOME OF THE PLANTS AND ANIMALS THAT MAKE HIGH ELMS SPECIAL

You will not be able to see all of these. They are rare and protected.

**E Dormouse.** This one is very sleepy, they are nocturnal, live in the tree canopy in summer, and hibernate for 7 months of the year.



**E**

**F Clouded Magpie Moth.** Caterpillar eats elm



**F**

**G Man Orchid:** Nationally scarce



**G**

**H Yellow-necked Mouse:** Associated with ancient woodland, good climbers. Note yellow collar

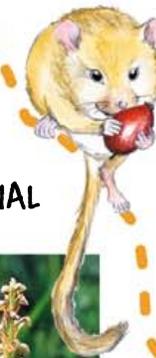


**H**

**I Green Hellebore:** related to buttercups, uncommon or locally rare



**I**



**H**

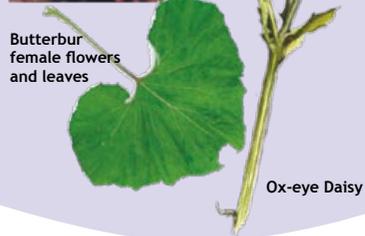


**I**

# High Elms Trail



Butterbur female flowers and leaves



Ox-eye Daisy

**1** You are in the formal gardens of the house where Lord Avebury grew up and where many famous people visited including Charles Darwin, Napoleon III, William Booth (social reformer and founder of the Salvation Army) and Prime Minister Gladstone. As you walk, notice an area of butterbur on your right which flowers in early spring before its large leaves develop. The plants here are all female. On your left an area unmowed in the summer allows ox-eye daisies to flower.



**2**

The ponds here were built in the 1890s. The drawing shows algae (simple plants) from a smaller pond, identified and drawn under the microscope by John Lubbock when he was 17. You can find algae in most ponds.



**3** Coltsfoot grows on thin soils close to the old ponds.

Cross the avenue of yew trees, planted in 1896 to be viewed from the drawing room of the mansion. Turn right towards golf clubhouse.

On your left is evergreen cherry laurel. This was introduced by the Victorians as an ornamental shrub and to provide cover for gamebirds. The leaves contain the poison cyanide which stops it from being eaten, but 2 small nectaries under the leaf near the midrib ooze sap which attracts ants and wasps. The deep shade, drought and poison it produces prevent other species from growing beneath it.



Coltsfoot



Cherry Laurel



**4**

High Elms Farm: there has been a farm here for hundreds of years, but it has been known locally as 'Clockhouse' since about 1826 when a wooden tower housing a large clock was added. A bell was rung to start and end the working day and at lunchtime. Sheep farming became less profitable in the 1820s so new cowsheds were built (their flint walls border the golf course) and an octagonal wooden granary with a space underneath which allowed circulation of air, and made it more difficult for rats and mice to reach the grain. A pony gin here pumped water from a deep well at the farm into storage tanks in the mansion roof.

Shortcut to post 16 or cross road and take right hand path.

**5**

On either side of the path is a hedge. Look for spindle and field maple which grow well in chalky soil. Beneath it, Jack-by-the-hedge is the food plant of orange tip butterfly caterpillars.



Orange Tip Butterfly



Jack-by-the-hedge

Spindle



**6**

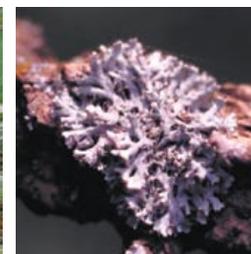
This meadow is covered in cowslips in spring. In November look for brightly coloured waxcap fungi in the short grass. Most will not grow where soil has been fertilised and so have become rare in Britain and Europe. The small trees along the hedge include English elm, some with corky bark on which grow lichens such as *Physcia tenella*. These are made up of a fungus and an alga living together. The elm trees will die of Dutch Elm disease when they get bigger, but new suckers will develop from the roots.



Elm leaves and fruit



Cowslip



*Physcia tenella*



Waxcap fungus



7

Toothwort grows here in spring, this parasitic plant has no need of green leaves: it attaches itself to the roots of trees such as elm, from which it gets all the food it needs. To your left is a patch of sweet violets, some with white flowers in April.



Toothwort



Sweet Violets

8

Hedgerows provide food, shelter and safe passage for many different animals from tiny minibeasts to voles, stoats and birds such as the long-tailed tit which nest here. Look for spikey blackthorn often used as a stockproof barrier, and the wayfaring tree whose young twigs are so flexible that they were used to bind faggots in the past.



Blackthorn



Wayfaring Tree



Long-tailed Tit

9

Chalk grassland on a sunny slope like this may have as many as 40 plant species/m2 and many different minibeasts live here. Keep to the paths, but see how many different plants you can see near this post. Listen for the laughing cackle of green woodpeckers, look for their droppings which look like cigarette ash but contain insect remains and show where they have stopped for a meal of yellow meadow ants.



10

As you walk downhill, the grasses become coarser as the soil beneath becomes deeper, with added clay particles from small patches of clay-with-flints which have washed down slope. In the summer you can smell sweet marjoram, a herb often used in cooking. Look for goatsbeard and pyramidal orchids. Butterflies like the small copper drink nectar from the flowers.



Small Copper Butterfly



Pyramidal Orchid



Goatsbeard

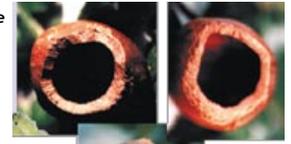
11

Hazel trees in this old picnic site are managed by coppicing. This means they are cut to ground level every 8-15 years, allowed to regrow and harvested for poles and fencing. Dormice use green hazel leaves and shred honeysuckle for their summer nests. Look for old hazel nut shells with small round holes as you walk through the woods, and see if you can guess which small mammal ate the nut.



Hazel leaves & catkins

Back Vole



Wood Mouse



Dormouse: note smooth inner rim



Green Woodpecker Dropping

Glaucous Sedge



Perforate St. John's Wort



Yellow Archangel

12

In spring before the trees cast much shade bluebells and yellow archangel flower near this post. Both are plants found in ancient woodland. Look for holes and crevices in tree trunks, homes for bats and birds.



Pipistrelle Bat



Yellow Archangel

13

This area was planted with larch in the 1940s to supply timber as part of the post-war effort to improve people's lives. Larch are one of the few conifers to shed their needles every year and the slightly increased soil acidity caused by their breakdown suits wood sorrel. In sunny places, if you are very quiet, you may be lucky enough to spot a common lizard basking.



Common Lizard



Wood Sorrel



Larch



White Admiral Butterfly

14

The circular watering hole was made for pheasants when the park was managed as a country estate. John Lubbock stopped hunting here in 1889. On warm summer evenings you can smell honeysuckle which attracts night-flying insects, such as lime hawk-moths whose mouthparts are able to reach nectar deep within the flower tube. Caterpillars of the white admiral butterfly only eat honeysuckle. These rare butterflies have been seen in the park and seem to be becoming more common. Please let us know if you see one.



Honeysuckle



Lime Hawkmoth

15

Look for artist's fungus (*Ganoderma applanatum*) on the dead part of the beech tree, it is one of the few fungi whose fruiting body may last many years, each year being marked by a new ring of growth. The big holes in the dead wood were made by woodpeckers, the smaller ones by minibeasts including longhorn beetles, most of which live as larvae eating dead wood, only emerging as adults. Other beetles such as cardinal beetles live under the bark of dead trees and eat other insects.



Artists Fungus



Cardinal Beetle

16



Longhorn Beetle *Strangalia maculata*

**16** The magnificent beech trees were planted about 1840 in memory of the 2nd baronet but many were lost during the hurricane in 1987 so young trees have been planted to replace them. Beech may grow to 36m (120ft) and live for 200 years. Beech nuts produced in large numbers about every 7 years are food for mice and birds. As you continue, look for pink campion, wild privet and evergreen spurge laurel which all grow well on chalky soils.



Spurge Laurel



Wild Privet



Beech



Pink Campion

Shortcut to Post 4

**17** Norway maple was planted here in the 1940s because it is a fast growing hardwood that could be used for turnery or kitchen wares. The numbers of these exotic trees are being reduced, allowing more native species to grow because these support more wildlife. Closely related sycamore also grows here. Below the trees are the separate male and female plants of dog's mercury. The female plants are pollinated by midges.



Norway Maple



Dogs Mercury (male flower)



Sycamore



Yew

**18** The kissing gate dates back to when the golf course was cattle grazed. Root plates where trees have fallen show the underlying chalk and very thin soil, while the many yew trees cast deep shade. Their wood is flexible and so was highly valued in the middle ages for longbows.



flower

Old Man's Beard



fruit

**19** Look for old man's beard which may live for 60 years but only grows on chalky soil. Its stems can grow 17m (50ft) long as they twine around other plants growing up towards the light.

Continue to a crossroads. When you cross the NE-SW path you are crossing an old racecourse which was put in by the 3rd Baronet. The last race meeting in 1864 attracted 40,000 people.

**20** Mosses and fungi grow on the remains of trees blown over in 1987 which were used to line the path. The earliest fossil mosses date back about 300 million years and they seem to have changed little for much of this time. They are very simple plants so they do not grow very big and need to live in places that are damp for at least part of the year. Fungi are breaking down the wood, returning nutrients to the soil. The parts you see in autumn are the fruiting bodies which produce millions of spores.

Just before you reach the lawns, notice the charcoal burner on the right, which uses some of the timber harvested from the sustainably managed woodlands.



Moss (*Eurhynchium praelongum*)



Plums & Custard

We hope you enjoyed the trail, come again soon.

