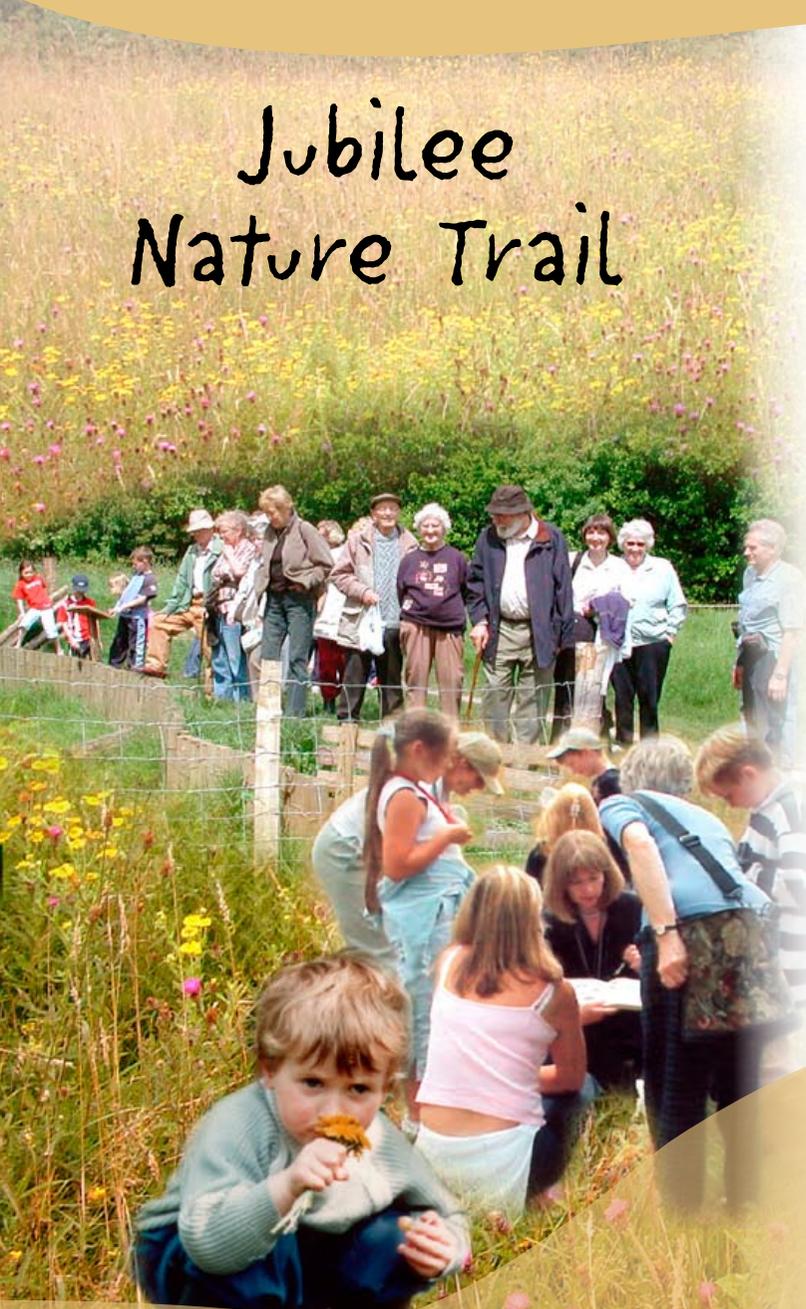


Jubilee Park Local Nature Reserve



Jubilee Nature Trail

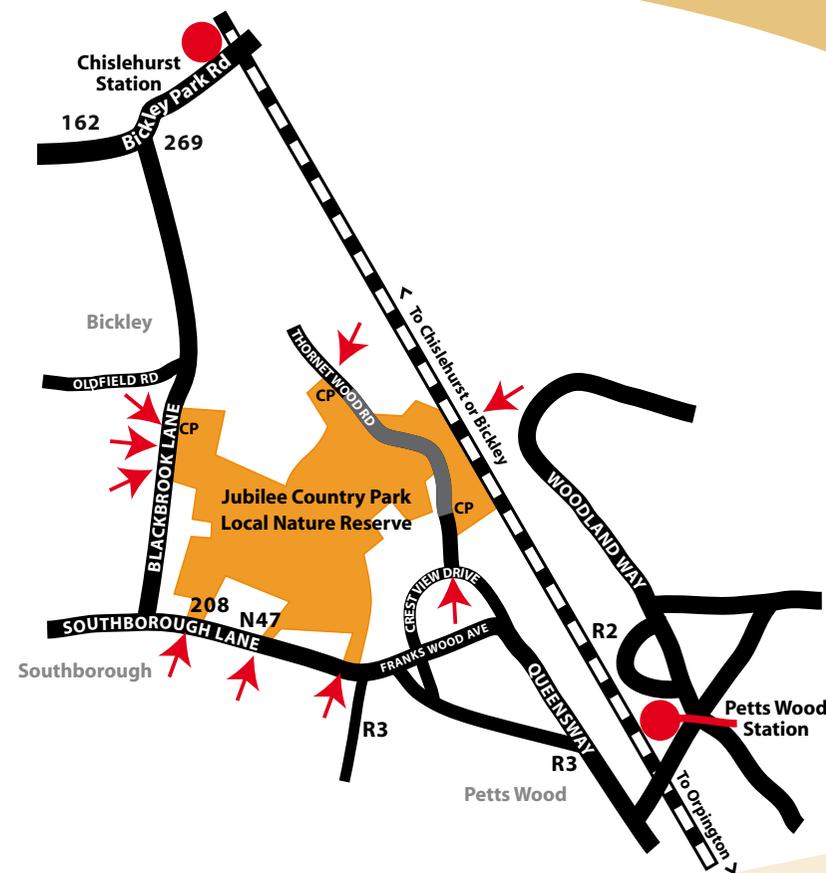


How to Get There..

Jubilee Country Park can be reached using the following bus routes:

- R2** (Mon-Sat) Petts Wood Stn to Biggin Hill Valley via Orpington
 - R3** Chelsfield to Locksbottom via Orpington and Petts Wood Stn.
 - R7** (Mon-Sat) Orpington to Bickley via Petts Wood Stn, Southborough Lane and Blackbrook Lane
 - 162** Beckenham Jctn to Eltham via Bromley, Bickley, Chislehurst and New Eltham
 - 208/N47** Orpington to Lewisham via Petts Wood Stn., Bromley and Catford
 - 269** Bromley to Bexleyheath via Chislehurst, Sidcup and Bexley
 - 273** Petts Wood Stn. to Lewisham via Chislehurst, Grove Park, Lee and Hither Green
- Trains:** Nearest Stations: Petts Wood, Bickley and Chislehurst

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



With thanks to Andy Purcell/CEC for use of weasel and common shrew images.

If you are interested in Jubilee Country Park and would like to become more involved, there is a Friends of Jubilee Park Group. For details about this and for up-to-date information about Bromley's countryside, including accessibility and nature trails, contact Bromley Countryside Service on 01689 862815, e-mail countrysideandparks@bromley.gov.uk or see www.bromleybiodiversity.co.uk

EMERGENCY PHONE: 020 8464 4848

The Wildspace Project Promotes Local Nature Reserves for Local People.



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



What to see in Jubilee Park

Jubilee Country Park is part of a wildlife corridor linking to open countryside via Petts Wood and Scadbury Park along the London Loop. Its 62 acres of wildflower meadows, hedgerows and semi-natural ancient woodland contain remnants of an ancient farmed landscape once common, but now rare. Look for some of the many plants and animals which have become uncommon in the countryside. Some 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 whacky weasel, 20-30 knowledgeable newt, over 30 awesome owl



Looking Back to the Past

Land at Jubilee Park is mentioned in the Domesday Survey of 1086 when it belonged to the Bishop of Rochester. Thornet Wood is referred to in early documents and the right to fell timber here was kept by the Bishops until 1845. From 1250-1400 the area was associated with a family called Blackbrook and by the 16th century some of Jubilee was pasture for sheep and cattle. In 1780 Bickley Hall was built nearby for the Wells family, wealthy shipbuilders from Deptford who rented and sublet fields at Jubilee for arable or pasture until John Wells was declared bankrupt in 1841. In 1916 the developer who built the Bickley Park Estate turned land here into a golf course but the clubhouse was bombed in 1940. The NE of the park was an army base in World War II, with anti-aircraft guns. Afterwards the land was let for grazing until it was bought in 1977 by Bromley Council, named to commemorate the Silver Jubilee of Queen Elizabeth II, and opened to the public in 1981.

How to get around

The Jubilee Trail is marked by 15 numbered posts, banded in yellow (see inside leaflet). It is about 2mils (3km) long and the underlying London clay means it is sometimes very muddy but at other times the soil dries forming deep cracks. There are gates, steps and though the park is fairly flat there are some short gradients over 10% (1:10) as shown overleaf. Please follow the Country Code, keep to the footpaths and remove your dog waste. Cycling is allowed on cycle track only, horse riding only on the bridleway. Fishing is not allowed. Bromley Parks and Open Spaces By-laws apply.



IN SUMMER SEE HOW MANY BUTTERFLIES AND MOTHS YOU CAN SPOT

Butterflies fly in daytime and favour brightly coloured flowers; many moths are nocturnal and are attracted by pale, scented flowers. Most adults of both drink nectar from a variety of flowers, but often the caterpillars only eat one type of plant.

A Swallow-Tailed Moth: caterpillar camouflaged as a twig to hide from predators lives on elder, hawthorn and blackthorn and hibernates during winter.

B Small Copper Butterfly: caterpillars eat dock and common sorrel

C Common Blue Butterfly (male): female is brown, caterpillars eat bird's foot trefoil.

D Small Tortoiseshell Butterfly on Fleabane: caterpillars eat young nettle leaves growing in a sunny position. Look for butterflies hibernating in your shed during winter.



LOOK AND LISTEN FOR BUSH CRICKETS AND GRASSHOPPERS

Young hatch in April/May from eggs laid the previous autumn. They look like adults, but can't fly. They grow and shed their skins several times before becoming mature. Adult males attract females with chirping song in summer. Sometimes eaten by birds or small mammals. Live for about 5 months. Crickets differ from grasshoppers in many ways which include having long antennae and eating soft-bodied minibeasts as well as plants.

E Roesel's Cricket

F Meadow Grasshopper-feeds on grass

There are at least 28 species of grass growing in Jubilee Country Park. How many can you see? (one mark per grass)

THE GREAT VARIETY OF MINIBEASTS PROVIDE FOOD FOR BIRDS, AMPHIBIANS AND SMALL MAMMALS



G Bluetits nest in tree holes and bird boxes; egg laying is timed so there are plenty of caterpillars and grubs for the growing chicks- as the chicks get bigger, adults may bring grubs and caterpillars back to the nest 600 times per day

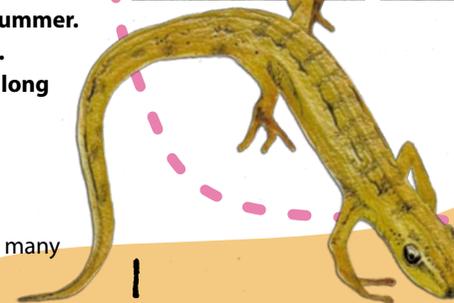
H Nuthatches use their chisel-like beaks to prise insects from tree bark or open acorns wedged into crevices.

I Newts breed in the ponds but spend most of their lives away from water hunting invertebrates and hiding under logs and stones.

J Common Shrews have to eat every 2-3 hours and need to eat 70% of their own body weight in minibeasts every 24 hours. Their hearts beat 900-1000 times/minute, but they only live for about a year.

K Weasels hunt for mice and voles.

IN WINTER LOOK FOR FUNGI, MOSSES AND LICHENS



The Jubilee Nature Trail

As you start the Nature Trail notice the goat willow and aspen to your left. In spring both have male and female catkins on different trees, but aspen is wind pollinated while the nectar of goat willow attracts insects early in spring. Aspen's flattened leaf stalks cause its leaves to flutter when the wind blows.



Left: Goat Willow leaves
Far left: female catkins
Above: male catkins



Right: Aspen leaf
Left: female catkins
Above: male catkins

1 This area was used as allotments from the 1940s -1971 and the woodland around you has developed since. The taller trees are early colonizers e.g. silver birch which only live for about 60 years. Look for longer-lived trees such as oak and beech which are now quite small but will eventually dominate this woodland. Dead wood is broken down by fungus, returning nutrients to the soil: in spring look for scarlet elf cups; at other times, witches butter.



▲ Witches Butter ▼ Elf Cups ▼ Silver Birch



2 Beneath the grassland here are remains of gun emplacements and buildings dating back to World War II. Calcium in the concrete makes the soil more alkaline so you can find chicory and the moss *Barbula convoluta*. Chicory was introduced here. In some places its roots were dried, roasted, ground and then used as a substitute for coffee during the war. At the path edge where the soil has been disturbed look for common mallow.

Barbula convoluta



Chicory



Common Mallow



4 More light reaches the woodland floor where the paths meet so there are many wildflowers here in summer. Look for field rose and gatekeeper butterflies drinking from nectar-rich blackberry flowers. Hedge woundwort borders the right of the path as you go into the woodland. Its leaves were used as a poultice applied to wounds and contain a volatile oil with antiseptic properties.



▲ Gatekeeper Butterfly



▲ Hedge Woundwort



▲ Field Rose

5 You are now in Thornet Wood. This semi-natural ancient woodland is dominated by oak trees: the 2 native species and hybrids between them. English oak has long-stalked acorns, stalkless leaves; sessile oak, has acorns with no stalks and long-stalked leaves. Look for ancient woodland indicator species such as bluebells, wood anemones and early dog violets which flower before the leaves grow on the trees and shade them. Ground beetles hunt in the leaf litter.

Ground Beetle



English Oak



Early Dog Violet



Yellow Meadow Ant

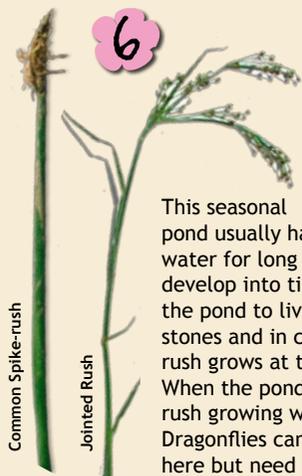
3 As you walk towards post 3 look for spindle trees planted on the left. This small tree likes alkaline soils and is so named because its wood was used in the past for making spindles, used when wool fibres were spun into thread. The big ant hill here is home to yellow meadow ants.



Spindle



Sessile Oak



Common Spike-rush

Jointed Rush

This seasonal pond usually has water for long enough for frogspawn to develop into tiny froglets which leave the pond to live in the long grass, under stones and in crevices. Common spike-rush grows at the back of the pond. When the pond dries, look for jointed rush growing where the water was. Dragonflies can often be seen hunting here but need permanent ponds to breed.



▶ Migrant Hawker Dragonfly



6

8

In front of you are Scots pine trees, planted in the 1930s at the golf course boundary. Note orange bark and quite short needles in 2s. The cones nearest the branch tips were fertilised last spring, those further down the branch are 2 years old. They ripen at 3 years old and shed winged seeds. Near the horse paddock is Austrian pine, with grey bark, longer needles and onion shaped buds. Listen for the high pitched call of goldcrests as they search for insects in the pine tree tops. Britain's smallest birds, they weigh about the same as a £1 coin.



Goldcrest



Scots' Pine & cone (far right)

9

Looking over into the horse paddock you can often see grey herons near the pond. In winter flocks of finches come to eat oil-rich dock seeds shed in autumn and redwings hunt for invertebrates once the berries in the hedgerows have been eaten.



Redwing



Greenfinch



Grey Heron



at end of hedge turn left

12

In summer the meadows are full of corky-fruited water dropwort, which is only found in 19 areas in Britain. Keep to the paths, but look for grass vetchling and common spotted orchid. In front of you an old medieval boundary ditch and bank is marked by a line of trees, mainly oak. Blackthorn here was once part of a stockproof hedge.



▲ Grass Vetchling
◀ Blackthorn
◀◀ Common Spotted Orchid



Large Skipper on Corky-fruited Water Dropwort

7

This old sandy bunker remains from the days when this part of Jubilee Park was a golf course. The drier, acid soil in this area supports different plants from most of the park including lesser stitchwort, tormentil and nectar rich Devil's-bit scabious. Wolf spiders hunt in the grass, the female carries the egg-sac under the abdomen and in many species when the young hatch they climb onto her back and are carried around by her at first.



▲ Wolf Spider ▼ Devil's-bit Scabious ▲ Lesser Stitchwort



Tormentil

As you walk towards post 8 the grass becomes coarser and there are less flowers because this area was once reseeded and fertilised.

10

As you approach the post look for soldier beetles hunting for smaller insects which have been attracted to the nectar-rich flowers of creeping thistle. Just over the bridge on the left hand side look for midland hawthorn whose flowers have 2 stigmas and 2 seeds in each berry. Common hawthorn to the right of the path has flowers with 1 stigma and 1 seed in each berry.



Left Above: Soldier Beetles on Creeping Thistle
Above: Midland Hawthorn
Left: Common Hawthorn

Follow the hedge laid in 2004

13

Red Bartsia



Goldfinch



In summer look for red bartsia near this post. This semi parasite gets some of its food from grass roots to which it is attached. In autumn and winter goldfinch and greenfinch fly in at dusk to roost in the scrub.



Keep to the right hand path

14

Lucerne



◀ Agrimony ▶



Listen for grasshoppers and crickets in summer. Agrimony on the right is an indicator of unimproved grassland. Lucerne is from the Mediterranean area but was often planted in the past as part of arable crop rotation to improve soil fertility, because like many plants in the pea family, in poor soils it develops nodules on its roots which contain bacteria able to change nitrogen in the air to nitrate (plant food).

15



◀ Lesser Celandine



▲ Cuckoo Pint

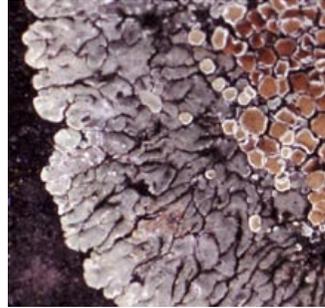
Next to this post is a veteran English oak tree. It marks the line of the ancient boundary of Towncourt Wood. Nearby in spring look for lesser celandine whose flowers only open in sunshine, and cuckoo pint, which is pollinated by flies attracted to its unpleasant smell and has poisonous red berries in autumn.



Look for lichens... 🐾 🐾

on tree trunks and branches, fences and concrete

Lichens are made up of a fungus and a species of alga growing together. Algae are very simple plants and like all other plants make sugars using sunlight, carbon dioxide and water. The fungus uses some of the sugar made by the algal partner and in return helps to stop the algal cells from drying out.

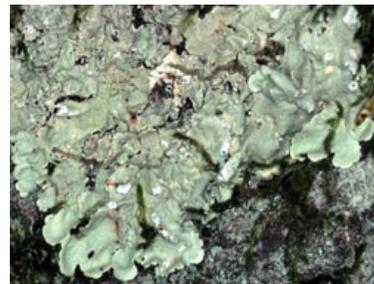


A

A Some of the lichens in Jubilee Park are like crusts, e.g A) *Lecanora muralis*. others are leaf-like (foliose) e.g

B *Hypogymnia physodes*

C *Flavoparmelia caperata*



B

C



D



F

D Some are fruticose (branched) *Evernia prunastri*.

E or have leaf-like scales at the base (squamulose) e.g. *Cladonia coniocrea*.

F Some appear to be just a powdery mass on tree trunks, *Lepraria incana*.



E

Lichens are used as pollution indicators. In the past sulphur dioxide was the main air pollutant and by looking at the lichens growing near your house you could tell roughly how much sulphur dioxide was in the air where you lived. A, E and F are all lichens which will grow in areas where sulphur dioxide pollution is up to $125\mu\text{g m}^3$, B and D tolerate maximum sulphur dioxide levels of $60\text{-}70\mu\text{g m}^3$, while lichen C will tolerate levels up to $40\text{-}55\mu\text{g m}^3$.

Now the level of this pollutant in the air is dropping and lichens like *Flavoparmelia caperata* are coming back to live in Jubilee Park that were not able to live there a few years ago. However levels of nitrogen oxides in the air (from car exhausts for example) are going up, so the species of lichen coming back to Jubilee Park are only those which can live with increasing nitrogen enrichment.

We hope you enjoyed the trail, come again soon.

