

**COUNTY:** ESSEX/GREATER LONDON

**SITE NAME:** EPPING FOREST

**DISTRICT:** EPPING FOREST/LONDON BOROUGH OF WALTHAM FOREST AND REDBRIDGE

**Status:** Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981 as amended

**Local Planning Authority:** Epping Forest DC/LB, Waltham Forest LB, Redbridge

**National Grid Reference:** TL 475035 to  
TQ 405865

**Area:** 1728 (ha.) 4270 (ac.)

**Ordnance Survey Sheet 1:500,000:** 167, 177

**1:10,000:** TL 40 SE & SW,  
TQ 49 NE & SW,  
TQ 39 NE & SE,  
TQ 48 NW,  
TQ 38 NE

**Date Notified (Under 1949 Act):** 1953  
(Wintry Wood: 1966)

**Date of Last Revision:** 1975

**Date Notified (Under 1981 Act):** 5 March 1990

**Date of Last Revision:** 1988

**Other Information:**

The majority of Epping Forest SSSI is owned and managed by the Corporation of London under the Epping Forest Act of 1878. The national importance of the site is underscored by its inclusion in D A Ratcliffe (1977) *A Nature Conservation Review*. It contains two English Heritage Ancient Monuments: Ambresbury Banks and Loughton Camp. Gernon Bushes is an Essex Naturalists' Trust Reserve. Gernon Bushes and the Wintry Wood/Lower Forest area were previously notified as part of a separate SSSI.

**Description and Reasons for Notification:**

Epping Forest is one of only a few remaining large-scale examples of ancient wood-pasture in lowland Britain and has retained habitats of high nature conservation value including ancient semi-natural woodland, old grassland plains and scattered wetland. The semi-natural woodland is particularly extensive, forming one of the largest coherent blocks in the country. Most is characterised by groves of overmature pollards and these exemplify all three of the main wood-pasture types found in Britain: beech-oak, hornbeam-oak and mixed oak. The Forest plains are also a major feature and contain a variety of unimproved acid grasslands which have become uncommon elsewhere in Essex and the London area. In addition, Epping Forest supports a nationally outstanding assemblage of invertebrates, a major amphibian interest and an exceptional breeding bird community.

The Forest lies on a ridge of London clay overlain in places by Claygate Beds and in the highest areas by Bagshot Sand and Pebble Gravel. In some of the southernmost areas, the sands and gravels on which the Forest lies are glacial in origin. This varied geology gives rise to a mosaic of soil types from neutral soils to acidic loams and from impervious clays to well-drained gravels. To a large extent these soil patterns have dictated the pattern of vegetation in Epping Forest.

Epping Forest was traditionally managed as wood-pasture in which the trees were lopped or 'pollarded' above the reach of browsing animals to produce a crop of wood. This practice also prolonged the life of individual trees and has created a distinctive woodland structure markedly different from that found under other forms of woodland management. During the 19th century this traditional system of wood management declined and eventually ceased in 1878 under the Epping Forest Act. However, recently pollarding has

been reinstated by the Conservators of Epping Forest in certain places. Owing to this history much of the woodland is dominated by pollards of considerable age, with some of coppice origin indicating an even older system of management. Pedunculate oak pollards are scattered throughout and occasionally dominate forming areas of oak wood-pasture but are less frequent in the vicinity of beech pollards. The understorey frequently consists of holly *Ilex aquifolium*; hazel *Corylus avellana* is rare. Dead and rotting wood in the old pollards, particularly those which are still standing, is of considerable value to many invertebrates and in particular to beetles (Coleoptera). The pollards also add to the structural diversity of the woodland which is important to birds, many of which feed on the rich invertebrate fauna.

There are at least four distinct woodland stand types in Epping Forest, including examples of three which are modified through wood pasture management. The pedunculate oak-beech is of particular interest since the beeches are the only remnant of the native distribution of the tree in Essex. This type occurs in the higher parts of the Forest, on the valley slopes of the pebble gravel cap and on soils derived from Bagshot Sands and Claygate Beds. Good examples of this stand type are present in Great Monk and Little Monk Woods, St Thomas' Quarters and near to Genesis Slade and Golding's Hill Ponds. The beech pollards are interspersed with pedunculate oak *Quercus robur* and ash *Fraxinus excelsior*. Although hazel and rowan *Sorbus aucuparia* are generally characteristic in the shrub layer of this vegetation type, these species are infrequent in this stand type in Epping Forest, and this is consistent with the long history of wood-pasture management. Holly is the only shrub frequently found, often forming very dense stands having increased in extent with the lack of grazing. The ground flora in these areas is very sparse due to dense shading and deep leaf litter: a consequence of the cessation of pollarding. In areas where light penetration is greater, purple moor grass *Molinia caerulea*, creeping soft-grass *Holcus mollis*, soft rush *Juncus effusus*, bracken *Pteridium aquilinum*, scattered ling *Calluna vulgaris* and bramble *Rubus fruticosus* are present.

The second notable woodland type, pedunculate oak-hornbeam, is largely confined to the London Clay around the margins and to the south of the Forest, for example, in Honey Lane Quarters, Highams Park, Walthamstow Forest and Bury Wood. Hornbeam pollards predominate with varying densities of pedunculate oak, the latter more common on the margins of woods, and small quantities of silver birch *Betula pendula*. The pedunculate oak-hornbeam woodland seen in Epping Forest is, again, a wood-pasture variant of this stand-type with holly the dominant species in the shrub layer, and hazel very scarce. The ground flora in these areas is similarly species-poor with deep leaf litter and only occasional patches of bramble, creeping soft-grass and soft rush. In several places there is a gradation from oak-hornbeam to oak-beech woodland giving rise to an unusual association of beech and hornbeam.

A third woodland type, lowland birch-pedunculate oak, occurs both as ancient wood-pasture and as recent secondary woodland invasive on former plains and grasslands. Even this secondary woodland contains scattered oaks of great antiquity, which were present at a low density on the original grasslands. The cessation of grazing has led to an increase in the area of this kind of woodland at the expense of grassland. The main stands of this secondary community are on the pebble gravels. Stands of birch-oak woodland in Deershelter Plain and between Jack's Hill and Long Running are good examples of this. Birch is dominant in the canopy with occasional degenerate oak pollards, young oaks, and a rather thin understorey of young birch. Purple moor-grass and bracken are both locally abundant especially where the canopy is thin. This type of woodland is frequent around Hollow Pond, Walthamstow. Rowan-Birch woodland is also present as secondary stands.

The site includes several areas of open grassland. These vary from acid grassland transitional with relict heathland to mown neutral grassland but they all add to the habitat diversity of the Forest. Many are old plains, the result of the former management as wood pasture. Areas of acidic grassland transitional with heathland are generally dominated by a mixture of fine-leaved grasses, including red fescue *Festuca rubra*, mat-grass *Nardus*

*stricta*, wavy hair-grass *Deschampsia flexuosa* and common bent *Agrostis capillaris*. In marshier areas, purple moor-grass frequently becomes dominant. Broad-leaved herbs typical of acidic grassland and heathland are frequent, including sheep's sorrel *Rumex acetosella*, heath bedstraw *Galium saxatile*, Petty whin *Genista anglica*, slender rush *Juncus tenuis*, tormentil *Potentilla erecta*, and ling *Calluna vulgaris*. Sunshine Plain supports one of only very few examples of wet dwarf-shrub heath remaining in Essex and the London area. This contains both ling and cross-leaved heath *Erica tetralix* as well as sharp-flowered rush *Juncus acutiflorus*, bulbous rush *Juncus bulbosus*, heath rush *Juncus squarrosus*, common cotton-grass *Eriophorum angustifolium* and oblong and round-leaved sundew *Drosera intermedia* and *D. rotundifolia*. The last three plants do not grow in Essex outside Epping Forest. Other areas of acidic grassland include Long Running, Deershelter Plain, Strawberry Hill Gravels, Warren Hill Heath and Wanstead Flats. The botanical quality and size of many of these areas has declined owing to cessation of grazing and subsequent colonisation by birch, pedunculate oak, hawthorn and blackthorn. However, recent conservation management has been successful in regenerating grassland and heathland and in reducing or reversing scrub encroachment.

There is an abundance of bogs, pools and ponds in the Forest, some of which are considerable botanical and entomological interest. Several ponds contain the water violet *Hottonia palustris*, a species which has become uncommon in Essex and the London area and is still decreasing. Goldings Hill Ponds are botanically among the most diverse ponds in the Forest with sweet flag *Acorus calamus*, lesser marshwort *Apium inundatum*, flowering rush *Butomus umbellatus*, bogbean *Menyanthes trifoliata* and the liverwort, *Ricciocarpus natans*, which is rare and decreasing in Essex. Bogbean also grown in Strawberry Hill Pond. Another Essex rarity which grows only in the Forest, in Wake Valley Pond, is Marsh St John's Wort *Hypericum elodes*. Bladderwort *Utricularia australis* occurs in half a dozen ponds in and just outside Great Monk Wood, including Baldwin's Hill Pond, Earls Path Pond and the Wake Valley Pond complex.

The invertebrate fauna of the Forest, and its associated habitats, is of outstanding national significance, notably for a number of communities associated with overmature trees and dead wood. The size of the Forest, and the pollarding of oak, hornbeam and, in particular, beech, have ensured a continual abundance and diversity of otherwise rare niches for invertebrates. The subcortical and dead wood fauna is exceptional including 66 Red Data Book and nationally notable species of beetle, fly and spider, most of which are now restricted entirely to large blocks of ancient forest. Several species occur at only one or two other localities in Britain, the fauna probably having most in common with that of Windsor Forest. The rarer species associated either with dead limbs on standing trees, or with the dead wood of fallen branches and trees include the beetles *Megapenthes lugens* (Endangered\*), *Ampedus cardinalis* (Vulnerable\*), *Biblioporus minutus*, *Malthodes crassicornis*, *Notolaemus unifasciatus*, *Osphya bipunctata*, *Platypus cylindrus*, *Ptenidium gressneri*, *Rhizophagus picipes*, *Silvanus bidentatus* and *Synchita separanda*, (all Rare\*); the flies *Ctenophora flaveolata*, *Trichoparaeia seria* (both Endangered), *Myennis octopunctata* and *Xylomyia maculata* (both Vulnerable); and the spider *Lepthyphantes midas* (Rare). An additional 55 nationally notable species associated with this habitat have been recorded from the Forest this century, making this one of the most important localities for this fauna in Britain.

The fauna associated with long-established sap runs and with damp or water filled rot holes in old trees is similarly exceptional, the latter microhabitat being frequent in the crowns of the old pollards. Again the species of these communities are mainly confined to large areas of ancient forest. The rarer species include the beetle *Prionocyphon serricornis* (Rare), and the flies *Mallota cimbiciformis* and *Pocota personata* (both Vulnerable), *Orthopodomyia pulchripalpis* (proposed RDB category 2: Vulnerable), *Brachypalpus laphriformis* and *Myolepta luteola* (both Rare) in rot holes, and the flies *Ferdinanda ruficornis* (Vulnerable), *Aulacigaster leucopeza*, *Oedalea apicalis* and *Systemus pallipes* (all Rare) occurring in sap runs. An additional 9 nationally notable species associated with these habitats have been recorded from the Forest.

Other well represented communities associated with the overmature trees are those occurring in bracket fungi, including the beetles *Rhizophagus oblongicollis* (Endangered) and *Enicmus rugosus* (Vulnerable), as well as 18 nationally notable species; and the inquiline fauna of ants' nests living in old stumps and rotting logs on the ground. This includes the beetles *Batrisodes buqueti* (Endangered and probably the most restricted species occurring in the Forest), *Batrisodes venustus* and *Amauronyx maerkeli* (both Rare) as well as 2 nationally notable species.

Although the prime interest for invertebrates lies in the trees of the Forest, the fauna associated with the various waterbodies, watercourses and associated wetland is also of considerable note. A number of species inhabit the sides of shady woodland streams, including the flies *Limnophila pictipennis* (Endangered) and *Erioptera nigripalpis* and *Epicypta limnophila* (both Rare), while those of the Forest's ponds and marshes with luxuriant vegetation support a rich aquatic and semi-aquatic fauna including the beetles *Hippodamia tredecimpunctata* and *Phytobius quadrinodosus* (both Rare) and the flies *Chrysogaster macquarti*, *Orthonevra brevicornis*, *Phalacrocer replicata* and *Sciomyza simplex* (all Rare). The waterbeetle *Hydroporus rufifrons* (Vulnerable) has been recorded, although this may have recently become extinct in the Forest. An additional 65 nationally notable species of dragonfly, waterbug, beetle and fly associated with various wetland habitats have been found in the Forest. The assemblage of dragonfly species alone, in the Forest, is outstanding, with 20 species present including the nationally notable downy emerald dragonfly *Cordulia aenea*. A small number of nationally notable phytophagous species are associated with grassland herbs, notably those on drier acid soils, and the fauna associated with herbivore dung, particularly that living in deer dung, includes 6 notable species. In total, over 360 Red Data Book and nationally notable invertebrate species have been recorded from the Forest.

The range and number of wetland habitats in the Forest also support an outstanding assemblage of amphibians. The list includes significant numbers of five of the native amphibians: smooth newt *Triturus vulgaris*, great-crested newt *Triturus cristatus*, palmate newt *Triturus helveticus*, common toad *Bufo bufo* and common frog *Rana temporaria*. The Forest also supports 4 reptiles: the adder *Vipera berus*, grass snake *Natrix natrix*, slow-worm *Anguis fragilis* and common lizard *Lacerta viparis*.

Owing to the wide variety of semi-natural habitats present, the Forest supports an outstanding bryophyte flora, with 177 species in evidence. A number of these species are now extinct elsewhere in Essex and the London area. One is a rarity, the moss *Zygodon forsteri*, found on beech pollards. In addition, there are six liverworts *Ptilidium pulcherrimum* (an epiphytic liverwort), *Ricciocarpus natans*, *Nardia scalaris*, *Scapania irrigua*, *S. nemorosa* and *Calypoglia muellerana*, each with only a handful of records in Essex, most of them in Epping Forest itself. However, the Forest's bryophytes have declined in variety as a result of problems associated with the abandonment of wood pasture management (shading, death of pollards, scrub on the heaths), human interference and atmospheric pollution. The Forest also supports 700 basidiomycete and at least 20 ascomycete fungi.

Finally, the Forest contains a good community of breeding birds characteristic of woodland and scrub. At least 48 breeding species are present including nightingale, all three species of woodpecker, sparrowhawk, woodcock, wood warbler, tree pipit and tawny owl. Again, it is the sheer area and diversity of semi-natural habitat that make the Forest attractive to these species.

\* The terms Endangered, Vulnerable and Rare refer to status categories 1, 2 and 3 respectively in Shirt, D.B. (ed.), 1987. *British Red Data Books 2, Insects*. The status of individual species will be subject to periodic review.