

FUNGI ROYALE

Some interesting larger fungi of the Royal Parks - Part I

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During the past two years I have had the distinct honour of carrying out base line surveys of larger fungi at a selection of the Royal Parks. These sites included Richmond Park, Bushy Park and Kensington Gardens. All three sites, former deer parks, fall within Greater London. The Richmond and Bushy Park surveys were carried out from April to December whilst the Kensington Gardens survey ran from August to December.

This is the first of three articles aimed at highlighting some of the more interesting species found during the surveys. These will cover fungi from dead wood, soil/leaf litter saprotrophs and mycorrhizal species. Before looking at some of the fungi, I think it important to give a description of each site.

At 995 hectares, Richmond Park SSSI is by far the largest park close to London. It was first enclosed as a deer park in 1637. It sits between 8 and 56 m above sea level and is a habitat complex comprising areas of open woodland within a matrix of grazed grassland/heathland, listed in the National Biodiversity Action Plan as lowland wood pastures and parkland. Soils are essentially acidic, ranging from poorly drained clay-loam, to gravelly, free-draining, sandier soils.

At 450 hectares Bushy Park is the second largest Royal Park within the Greater London Area. The part that includes the current boundaries of Bushy was enclosed as a deer park in 1491. It lies in outer southwest London in the London Borough of Richmond, within a loop of the River Thames. It sits on flat, low-lying ground of the Thames floodplain, varying in altitude from 10 m in the South to 15 m in the North West corner. Bushy Park shares the same historic use as a deer park, with similar areas of open woodland within lightly deer-grazed grassland. The deer are far less numerous than in Richmond Park and as a result far less grazing

occurs. As with Richmond, oak is the dominant tree, although the park has lost the majority of its veteran trees over the decades.

The 98 hectares of Kensington Gardens in central London straddle the boroughs of the City of Westminster and The Royal Borough of Kensington and Chelsea. This is a very cosmopolitan green space differing from both Richmond and Bushy. The land was enclosed as a deer park in 1536 but includes a principal royal residence and became a designed landscape. Kensington Gardens shares its origins with Hyde Park and is situated in part of a shallow valley formed by the Westbourne River at heights between 16 and 29 metres above sea level. Soils are generally free draining, mildly acidic, brown earths of a sandy loam texture. These overlie river terrace gravels.

Standing and Fallen Dead Wood

Standing and fallen dead wood is an essential habitat for a succession of wood-rotting fungi. Dead wood is plentiful in Richmond Park and its associated invertebrate assemblage is internationally renowned. It is not as plentiful in Bushy Park and even less so in Kensington Gardens. A selection follows of the more interesting species of wood-inhabiting fungi found in the parks.

Piptoporus quercinus – Richmond Park - Fig. 1 Richmond Park has the distinction of being one of a limited number of sites in England that is host to the UK BAP listed *Piptoporus quercinus*, which fruits on a selection of the older and veteran oak trees within the park (for previous articles on this species see FM 2(3): 88–89, 2001; FM 5(2): 43–44, 2004 and FM 7(4): 143–144, 2006). This species is known to be a sporadic fruiter, with sometimes long gaps between fruiting periods. It fruits mainly during July but can stretch into August. We were very lucky during the summer of 2008 when an additional 13 host

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trees were recorded with this species during the survey, raising the total of previously recorded sites made by Peter Roberts, Shelley Evans and Alick Henrici during the summer of 2001 to 23. This species is protected under Schedule 8 of the Wildlife and Countryside Act 1981, which is enforced by Natural England meaning that a licence must be obtained before any collections are made.

Spongipellis delectans – Richmond Park - Fig. 2

Recorded from only six counties in southern England, including Surrey, this is the first record from Surrey in 11 years; in total there are currently only 19 records from this county. It was found on a fallen, dead horse chestnut tree in late November and has also been recorded on ash, sycamore and beech. Once again this highlights the value of leaving dead wood *in situ*. This relatively soft-fleshed species has irpicoid (maze-like to tooth-like) tubes on the underside, which can help with identification in the field. The upper surface was irregular, hirsute and pitted as if eaten away. It measured 40 to 90 mm across, with tubes up to 15 mm long and flesh 5 to 12 mm thick. Spores were ellipsoid, hyaline and not particularly thick-walled, measuring 6.9–7.7 x 4.6–5.3 µm.

Coriolopsis gallica – Richmond Park - Fig. 3

This used to be a rare dead wood specialist but has become much commoner in southern England in recent years. It was recorded from a



Fig. 1. *Piptoporus quercinus*, growing on an ancient oak in Richmond Park, summer 2008. Photograph © Andy Overall.

heap of dead beech wood; some decorticated, some not, and from a nearby ash tree, just west of the Prince Charles Spinney.

The brown, suede-like appearance, with a tough, minutely hirsute upper surface, is a good field characteristic for this species. The upper surface will turn almost black with a solution of KOH. The flesh is 5–15 mm thick and dark brown in contrast to the pale tubes. The pores are rounded to angular, cream-grey and darken somewhat upon handling. These specimens were 46 to 120 mm across with several fusing together. Spores are large and allantoid (sausage shaped), measuring 8.4–13.8 x 3.0–4.2 µm. I found this collection to have a fudge-like smell but smells can be rather subjective.

Gloeoporus dichrous – Richmond Park - Fig. 4

This species was recorded from four different areas of Richmond Park, all from small dead branches of oak. It appears to be spreading rapidly in the UK (see Ainsworth, 2004 and Henrici, 2007) and no longer qualifies for Near Threatened status. It is characterized by having a two-toned appearance and gelatinised pore layer. The fruit bodies are often fused together and either pileate or resupinate, often with a variable, cottony margin. Spores are small, allantoid, hyaline and thin-walled, measuring 3.5–5 x 0.8–1.4 µm.

Phellinus torulosus – Bushy Park - Fig. 5

It is not surprising that I found myself a little confused when confronted with this species, as the British Isles are considered to be its northern-most limit. This is most obviously reflected in its current status as an endangered red data list species with just 24 records currently held in the FRDBI. None of these are from Middlesex so this will stand as a first for the county. It is considered common and widespread in the Mediterranean region; I have seen it in Cyprus. The Cyprus specimen did not resemble this collection in the slightest, appearing much thicker fleshed, with a more pronounced obtuse margin and with the surface covered in moss.

It has been recorded on a surprisingly wide range of hosts; here it was fruiting at the base of old hawthorn trees (*Crataegus*). The pale to rusty brown fruitbodies are often single or fused together, as shown in the picture and can measure up to 45 cm or more across and 28 cm



Fig. 2. *Spongipellis delectans*, growing on a fallen, dead horse chestnut, late November 2008. Photograph © Andy Overall.



Fig. 3. *Coriolopsis gallica*, growing on dead, decorticated beech wood, Richmond Park, 2008. Photograph © Andy Overall.

deep with an obtuse margin. The upper surface, often moss covered, can have a velvety look to it from short, tough, matted hairs that eventually become smooth and blackened in patches. The setae (hairs) found in the hymenium are infrequent. Successive layers of context in the cut flesh are sometimes separated by fine black lines and the whole context will blacken in KOH. These specimens were rather thin-fleshed for a bracket fungus of this size, as the context can be up to 11cm thick; this was probably because these were rather old and dry. The under side is yellowish to reddish brown with 6–7 round pores per mm. Spores are ovoid-ellipsoid, smooth, negative in Melzer's reagent and measuring 4–6 x 3–4 μm . I have to thank Martyn Ainsworth for identifying this collection.

Further finds

Two other interesting species, both on poplar are briefly noted. The uncommon *Schizophyllum amplum*, which resembles a small, pale *Auricularia auricula-judae* (Tree Ear), was recorded from dead fallen twigs and small branches of *Populus alba* along the southern boundary of Richmond Park. It was formerly placed in its own genus *Auriculariopsis*. *Ossicaulis lignatilis* was recorded from rotten sections of *Populus nigra*, found along the eastern boundary. This is an uncommon but widespread species that is more often found inside large hollow stumps of beech or elm. It is a rather unusual species, looking very much like species of *Clitocybe*, which grow on soil and within which it was once included. It often has a strong flour-like odour but this can vary. The fruitbodies are between 20 and 120 mm across, white to cream and hygrophanous. The stem is



Fig. 4. *Gloeoporus dichrous*, growing on small fallen branches of oak, Richmond Park, 2008. Photograph © Andy Overall.



Fig. 5. *Phellinus torulosus*, growing at the base of an old hawthorn, Bushy Park, 2008. Photograph © Andy Overall.

tough, central or eccentric and often buried in the woody substrate. Spores are white, ellipsoid, smooth and measure 4.0–6.0 x 3.0–4.0 μm . It is illustrated by Phillips (1981, p.182) as *Pleurotus lignatilis*.

All of these wonderful green spaces, that we are so fortunate to have today, have endured many changes and influences since the days of being hunting areas for deer, not least two world wars, agricultural uses, Dutch elm disease and two devastating recent storms. However, a testament to our custody, ancient parks such as Richmond and Bushy remain relatively intact. As this habitat type is very scarce in other parts of Europe and indeed the world, these old deer parks are now of international importance and will become increasingly so.

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