

Hampstead Heath-Dam Project
Fungi Survey Report
Addendum – Spring 2014



Cortinarius irregularis ©Andy Overall

Prepared
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1.0

Addendum Summary

May 2014

From August 27th to November 22nd 2013 a report was commissioned by Atkins Global on behalf of the City of London as part of an environmental impact survey, to give an appraisal and provide base line information of the larger fungi occurring in and around areas within which, in-depth dam work is to take place.

To summarise a total of 251 species from 1,117 records were identified during ten visits. Sixteen species were new to Hampstead Heath, four of which were new to the county of Middlesex. Four red data listed species were among these records.

In addition to the survey, a further six visits were commissioned for March and April 2014 to take into account areas not previously covered during the survey. The areas covered are the fenced off areas, where accessible, of both the Hampstead and Highgate pond chains. A total of 21 species from 40 records were identified from around the pond margins between March and April 2014. One of these species, *Cortinarius irregularis*, is new to Britain. Another collection, that of, *Conocybe nemoralis* is rare and is the first record for the county and Hampstead Heath. These and other species are covered in more detail below.

The report concludes that even though spring is not the optimum period for the fruiting of larger fungi, the surveyed areas, in part, currently hold promise for a widely diverse range of fungal species, which would be represented by most genera of the major groups of larger fungi to be expected from the complex of habitats therein. Some areas were found to be very overgrown with ground ivy, bramble, where also some thinning of trees would help create a more viable habitat for larger fungi to thrive. It is understood that such an environment does provide invaluable habitat for nesting birds, mammals, reptiles, insects and spiders, as well numerous plants. Taking this into consideration, the report suggests that appropriate areas could be designated and controlled for the promotion of larger fungi. Where species have been identified as of local or national importance, from this or future surveys, these should be given protection under applicable BAP schemes. Any major influence to the hydrology or any serious habitat destruction as a result of the dam works will affect, if not destroy the larger fungi communities in those areas, impact has to be kept to a minimum to safeguard these habitats. Translocation of any of the red data or rare species is not recommended or really an option, as this is at present an unsuccessfully proven method.

2.0 Brief description of the pond areas surveyed

Firstly, it has to be taken into account that this addendum survey report was carried out at a time when larger fungi are not at their most active in producing fruiting bodies, especially mycorrhizal fungi.

Depending on temperature and moisture, spring can be a fairly good period for fungi, especially those species belonging to the phylum – Ascomycota, which are often very small, easily overlooked and do not resemble your normal looking mushroom in any way shape or form. However, the more conspicuous spring-fungi would be those from the Basidiomycota, resembling your more traditional mushroom types and bracket fungi. What follows is a brief description of each pond.

Hampstead No 1 Pond-Compartment No. 1,123

Bordered by a number of different species of trees and shrubs on clay, namely the mycorrhiza forming *Cratageus*, Hawthorn, *Salix* - willow and *quercus* - oak mixed with the non-mycorrhiza forming *Pseudoacer platanus-sycamore* and *Platanus acerifolia* London Plane. On the south-western bank, a mossy, shingled path bordered by Hawthorn offers good habitat for associated fungi.

The Common Crampball, *Daldinia concentrica* was found on fallen branches, lying in the area, as dead wood is left in situ.

Hampstead No 2 Pond-Compartment No. 1,121

The nature of this pond is quite similar to Pond No 1 with a few more mycorrhizal tree species, such as poplar along the northern margin. The poplar tree on the northwest corner of the pond has the occasionally recorded, *Lactarius controversus* associating with it. The eastern bank has oak and willow trees, however the soil seems quite compact from heavy use. The west bank has more hawthorn trees along the margin; the clay soil here is also quite compact.

Mixed Bathing Pond-Compartment No. 1,144

The western bank of this pond is of most interest as it contains a number of oak trees mixed with various shrubs, hawthorn, with some young beech on clay. There is no public access so compaction is not such a problem. However, much of the ground flora is dominated by ivy, which does not provide an optimum habitat for fungi. Areas where the ivy is not so dominant have more potential for soil dwelling larger fungi. Plenty of dead wood provides habitat for associated fungi.



FIG 1. West bank of the Mixed Bathing Pond showing dominating ivy ©Andy Overall

FIG 2



Sloping mossy bank with mature oak and beech standard
east bank - Mixed Bathing Pond ©Andy Overall

FIG 2B



Dominating ivy ©Andy Overall

Viaduct Pond-Compartment No. 531

The northern bank, dominated by sycamore and ivy does not provide good habitat for fungi, fallen dead wood is present which does provide for wood rotting fungi.

The western bank bordered by young hawthorn and willow will provide a good habitat for associated, mycorrhizal and other fungi. Dead wood lying behind the willow also provides a good habitat; the rare *Conocybe nemoralis* was recorded on moss upon the dead wood.

The eastern bank, west side of the viaduct, with its mossy ground, is also a good potential habitat for any present willow, birch and hawthorn associating species. The soil here is also quite sandy, therefore free draining, which many fungi prefer. No public access allows for less compaction.

East side of the viaduct, has large sycamore, false acacia, hazel and young hornbeam and beech trees. It has plenty of dead wood with associating species such as, *Lenzites betulinus*, *Daldinea concentrica*, *Auricularia auricula judae* and *Coprinellus micaceus*.



FIG 3. Young beech & hornbeam next to hazel on east viaduct bank ©Andy Overall

Highgate No 1-Compartment No.1,107

The east bank is closed off to the public and therefore receives less compaction to the soil. It is dominated by sycamore mixed with alder and willow on clay at the pond margin and a couple of large oaks at the base of the east slope away from the pond. The eastward slope is overgrown, with little light and a lot of ground ivy. On the top of the slope, it is quite mossy with short grass, which would provide a potential habitat for fungi associating with the alder and willow. The west bank is heavily used by dogs, yet has small willow shrubs along its border, which would have associated fungi. The northern bank has hawthorn and large poplar trees, but in part is heavily trodden which may not be a viable habitat. At the most eastern end, a small elm copse offers a promising habitat. The east bank is inaccessible.

Men's Bathing Pond-Compartment 1,112

The east bank of this pond is inaccessible as is much of the west bank; only the north and south banks are easily accessible. The southern bank consists of a narrow grassy strip from which members of the public are allowed to fish. The western end of this strip is the most likely to provide habitat for fungi which maybe associating with the hawthorn on the corner. Small saprobic fungi such as *Parasola*, may well be present on other parts of this grassy strip. The north bank consists of a number of mature hornbeam trees and one large oak among grass, which would provide a good habitat for associated fungi, saprobes and parasitic.

**Model Boating Pond-
Compartment No. 1,113**

Large hulks of old willow trees and mature Ash trees of the east bank are the most valuable habitat, surrounding this pond, providing an invaluable habitat for associated species. The east bank contains improved/amenity grassland with the scattered willow and ash and the west bank less so with a few lime trees. It is the east bank with its old willow and ash on grassland that is of most valuable to all kinds of larger fungi.

FIG 4. Old Willow on the east bank of the Boating Pond ©Andy Overall

Bird Sanctuary Pond-Compartment No.1,040

All banks surrounding this pond hold good potential for all types of fungi associating with the willow, oak and alder present, the surrounding wet areas may also provide habitat for specialist fungi of this habitat type. The willow has a healthy population of the polypore, *Phellinus igniarius*, not a species you encounter too often and especially not in such healthy numbers. The open grassy areas of the east bank will provide good habitat for fungi associating with the bordering willow. There are a number of horse chestnut trees along the east border with Mill field Lane, which are not mycorrhizal but will however provide habitat for saprobic and parasitic fungi. Ground ivy is fairly dense in the area, around the horse chestnut.

FIG 5.



Bird Sanctuary Pond-east margin ©Andy Overall

FIG 5b.



East boundary showing Ivy ©Andy Overall

Ladies Pond-Compartment No. 1.032

This is very similar to the Bird Sanctuary Pond in having a healthy population of willow

the associated *Phellinus igniarius* in healthy numbers. A large grassy area used by bathers may also provide habitat for grassland species. Much of the east border with Millfield Lane is dense with ivy ground flora and horse chestnut trees, providing very little fungi on the ground but may provide habitat on dead wood. The north bank is a wet area with willow which will provide a good habitat for specialist and associated fungi. The west bank is partially inaccessible and rather overgrown. The south bank is taken up by the lifeguard premises, a small grassy area with some willow, that backs onto the Bird Sanctuary behind the premises may also provide habitat for different types of fungi.

Stock Pond-Compartment 1,026

It is the west bank of this pond which I feel holds the most potential, as it has mature oaks, mixed with birch, willow, one or two beech and hornbeam trees on clay gate beds (mix of sand and clay), it also has mossy sloping banks, excellent habitat for fungi of all types. There is no public access therefore very little impaction of the soil or tree roots can take place. The east bank is very crowded with a ground flora of bramble and ivy, with a mix of trees including willow, birch, elder and dead fallen elm, which does provide good habitat for wood rotting fungi, such as *Polyporus squamosus*. The north bank is a wetter area with dead wood also potentially a good habitat. The south bank is narrow although has some oak trees, so although relatively small, may provide a good habitat.

FIG 6.



Stock Pond-east boundary-bramble ©Andy Overall

FIG 6B



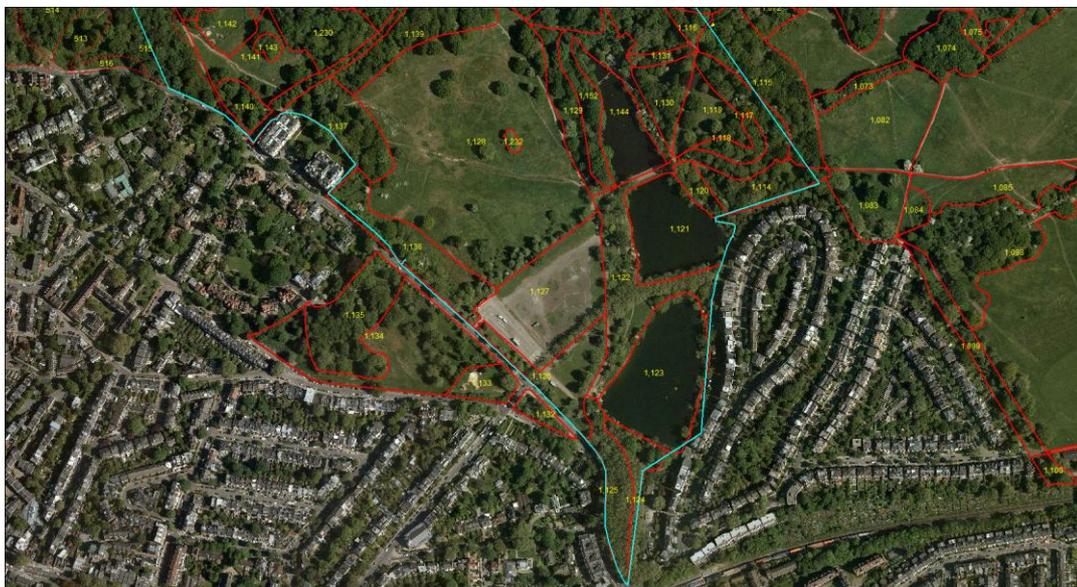
Stock Pond-west bank ©Andy Overall

Hampstead Pond Chain (Inc. Vale of Health)

Fig 7 & 7b Biological Recording Maps of compartments used for survey



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Cities Revealed photography copyright The Geo Information Group, 2010



Fig 8 & 8b
Highgate Pond Chain



Cities Revealed photography copyright The Geo Information Group, 2010



Cities Revealed photography copyright The Geo Information Group, 2010



3.0 Results, Areas and Species of Note

A total of 21 species from 40 records were identified from around the pond margins between March and April 2014. One of these species, *Cortinarius irregularis*, has been identified as new to Britain. The mycorrhizal genus *Cortinarius* houses the single most taxa known worldwide within a single genus, amongst which there is a high degree of morphological and microscopic variability, therefore sometimes needing molecular analysis to determine a single species. Another collection made, *Conocybe nemoralis* is rare and is the first record for the county and Hampstead Heath. *Mycena abramsii*, another rarity, was recorded from the east side of the Stock Pond on dead fallen elm and stands as the 3rd record for Middlesex and the 1st for Hampstead Heath. These and others are covered in more detail below. There is quite a lot of ground ivy and bramble around some of the ponds, (Mixed Bathing west, Woman's Bathing east, Highgate No 1 north, Stock Pond east, Bird Pond east) and combined with too many sycamore and other trees; this does not provide a good habitat for larger fungi due to loss of light and water. There is also a fair amount of soil compaction around the lower level ponds on clay, such as Hampstead No 1 and 2. At present the inner east margin of the Bird Sanctuary Pond, parts of the western margin of the Stock Pond and the margins lying west side of the viaduct show most potential for larger fungi, as they are more open with fewer trees and are less covered with ivy and bramble.

3.1 *Cortinarius irregularis*

TQ27196 86132 – West Bank – Mixed Bathing Pond compartment 1,144

This species of *Cortinarius* belongs to sub-genera of the genus called *Telemonia* amongst which the species are notoriously difficult to identify. Following much deliberation with fellow field mycologists and using macro and micro features I have arrived at a species that fits within the sub-section *Colymbadini* (Melot) and a species close to *Cortinarius irregularis*, the reason why I have entered cf. - compare to or confer to. The collection with details and photographs has been sent to Kew for confirmation.



Fig 9. *Cortinarius irregularis* ©Andy Overall

3.2 *Conocybe nemoralis*-TQ26918 86457-Viaduct Pond-west side of viaduct – west bank-compartment 531

This diminutive, rare, saprophytic species was found fruiting on a dead, moss-covered branch, lying directly behind the small willow trees bordering the narrow western margin of the pond. There are currently only four records of this species on the Fungi Recording Database for Britain and Ireland (FRDBI) and this, the fifth record, constitutes the first for Middlesex and Hampstead Heath.



Fig 10. *Conocybe nemoralis* ©Andy Overall

3.3 *Phellinus igniarius* – Bird Sanctuary Pond and Ladies Pond Enclosure inner eastern margins- On *Salix repens*.

This is not a particularly rare species as it's regarded as being occasional but widespread). In fact there are 800 records on the FRDBI, but only six of these are from Middlesex and only one from Hampstead Heath which was brought to my attention by chief tree officer David Humphries. This record is actually from the *Salix repens* bordering the Ladies Pond enclosure pathway leading up to the main gate. Attention has to be drawn to these records, not only because of the few records from the Heath and county, but because of the thriving population that exists within these two ponds. It is a parasitic species that is mainly reported from *Salix* but can also occur on *Alnus*, *Betula* and *Malus*. The British and Irish Basidiomycete checklist states that this is probably a species complex that is not yet fully resolved.



Fig 11. *Phellinus igniarius* ©Andy Overall

3.4 *Mycena abramsii* –TQ 27450 87205 – East Bank - Stock Pond on dead fallen elm branch and moss.

This species is considered rare yet widespread by the British & Irish Checklist of Basidiomycetes. There are currently 216 records on the FRDBI with only 2 for Middlesex; one of these is my own from Kenwood. It most often recorded late spring/summer on the dead wood of hardwood trees, usually hazel, alder or as in this case elm.



FIG 12. *Mycena abramsii* on a fallen, moss covered Elm branch ©Andy Overall

4.0 Recommendations

If the majority of the pond margins were to be largely unaffected by the dam works, once the work has been completed and if it hasn't already been done as a result of the dam works, I would recommend the clearing of ground ivy, bramble and the removal of some trees, such as sycamore and other trees. As this type of ground flora provides invaluable habitat for nesting birds, mammals, reptiles, insects and spiders, as well as other plants, it would be preferable to identify appropriate areas for clearance, which would create more space and light around some of the pond margins to help promote larger fungi. Areas of note would be the west bank of the Mixed Bathing Pond, the south bank on Highgate No 1, Ladies Pond north end, Stock Pond – east margin, wherever it is overgrown and too 'tree crowded'. This would most definitely provide a more fungi friendly environment in these areas and allow for any associating fungi to thrive. If threatened by the works and if possible, it would be worth trying to protect the large willow hulks on the eastern bank of the Boating Pond, as these are very good habitat for wood rotting fungi and the beetles that associate with the fungi. With regard to soil compaction around the ponds with public access, this is very difficult to manage on a very popular green space such as Hampstead Heath. It may be worth identifying some of the compaction areas that have the promise for fungi to carry out some periodic terra venting. Heavy vehicles and machinery in use for the dam works or otherwise, will cause more compaction, so should be kept at a minimum.

5.0 Conclusion

Firstly, it has to be taken into account that this addendum survey report was carried out at a time when larger fungi are not at their most active fruiting, especially the mycorrhizal fungi.

In addition to the conclusion of the main survey report carried out during August to November 2013, I found many of the pond margins to be dominated by ground ivy or bramble and to be 'over crowded' with trees and shrubs. This type of environment is not particularly conducive to larger fungi associating with the trees present around the pond margins, such as willow, alder, oak or birch. This was highlighted by the observation of *Cortinarius irregularis*, which I found fruiting on soil in one of the few areas on the west margin of the Mixed Bathing Pond, where the ground ivy is thin. If there were more areas like this, larger fungi may well appear. The report recommends that some clearance should take place. Taking into consideration the value of this habitat type to nesting birds, mammals, reptiles, insects, spiders and other plants, areas for clearance would have to be appropriately identified and carried out. Where there is public access to the pond margins a certain amount of soil compaction is in evidence, such as with Hampstead Ponds 1 & 2, compaction will inhibit or destroy the mycelium and therefore the fungi. Identification of the worst areas with 'fungi promise' could offer the solution of terra venting. The use of heavy machinery and vehicles should be kept at a minimum on the pond margins during the dam works or otherwise, as this will only make the compaction worse. Plenty of dead wood is left in situ which does provide a good habitat for specialist wood rotting fungi, highlighted by new records of the rare *Conocybe nemoralis* and *Mycena abramsii*. Despite the overgrown areas, some of the pond margins do hold future potential, such as the inner east margin of the Bird Sanctuary Pond, parts of the western margin of the Stock Pond, the margins west side of the Viaduct and the east and west margins of the Vale of Health, which was covered in the main report. These areas, as well as the healthy populations of *Phellinus igniarius* on *Salix repens* at the east margins of both the Ladies Pond enclosure and the Bird Sanctuary Pond need to be protected from any likely invasive action as a result of the planned dam works.

Where species have been identified as of local or national importance, from this or future surveys, these should be given protection under applicable BAP schemes. Any major influence to the hydrology or any serious habitat destruction as a result of the dam works will affect, if not destroy the larger fungi communities in those areas, impact has to be kept to a minimum to safeguard these habitats. Translocation of any of the red data or rare species is not recommended as this, as yet, has not proved a successful method.



FIG 12. Bird Sanctuary Pond-*Phellinus igniarius* fruiting on Willow-©Andy Overall

Appendix 1: Species lists (some visits had no records)

12.03.2014

<i>Coprinellus micaceus</i>
<i>Lenzites betulinus</i>
<i>Daldinea concentrica</i>
<i>Trametes versicolor</i>
<i>Auricularia auricula judae</i>
<i>Geastrum fimbriatum</i>
<i>Daedaleopsis confragosa</i> var. <i>tricolor</i>
<i>Phellinus igniarius</i>
<i>Trametes versicolor</i>
<i>Daldinea concentrica</i>
<i>Galerina marginata</i>

27/03/2014

<i>Auricularia auricula judae</i>
<i>Conocybe nemoralis</i>
<i>Phellinus igniarius</i>
<i>Pleurotus pulmonarius</i>
<i>Trametes versicolor</i>
<i>Auricularia auricula judae</i>
<i>Ganoderma resinaceum</i>

<i>Daedaleopsis confragosa</i> var. <i>tricolor</i>
<i>Exidia glandulosa</i>
<i>Auricularia auricula judae</i>

09/04/2014

<i>Cortinarius irregularis</i>
<i>Pluteus cervinus</i>
<i>Daldinea concentrica</i>
<i>Reticularem lycoperdon</i>

22/04/2014

<i>Coprinellus domesticus</i>
<i>Parasola leiocephala</i>
<i>Galerina marginata</i>

30/04/2014

<i>Mycena leptcephala</i>
<i>Calocybe gambosa</i>
<i>Coprinellus micaceus</i>
<i>Trametes versicolor</i>
<i>Stereum hirsutum</i>
<i>Coprinopsis atramentaria</i>
<i>Calocybe gambosa</i>
<i>Entoloma clypeatum</i>

<i>Pluteus cervinus</i>
<i>Coprinellus micaceus</i>

Appendix 2

Bibliography

- Antonín, V. & Noordeloos, M.E. (2004). **A monograph of the genera Hemimycena, Delicatula, Fayodia, Gamundia, Myxomphalia, Resinomycena, Rickenella and Xeromphalina (Tribus Mycenae sensu Singer, Mycena excluded) in Europe.** IHW Verlag. 279 pp.
- Bas, C., Kuyper, Th.W Noordeloos, M.E. & Vellinga, E.C. (eds) (1988). **Flora Agaricina Neerlandica 1. Entolomataceae.** Rotterdam: Balkema. 182 pp.
- Bas, C., Kuyper, Th.W Noordeloos, M.E. & Vellinga, E.C. (eds) (1990). **Flora Agaricina Neerlandica 2. Pleurotaceae, Pluteaceae, and Tricholomataceae (1).** Rotterdam: Balkema. 137 pp.
- Bas, C., Kuyper, Th.W Noordeloos, M.E. & Vellinga, E.C. (eds) (1995). **Flora Agaricina Neerlandica 3. Tricholomataceae (2).** Rotterdam: Balkema. 183 pp.
- Bas, C., Kuyper, Th.W Noordeloos, M.E. & Vellinga, E.C. (eds) (1999). **Flora Agaricina Neerlandica 4. Strophariaceae, Tricholomataceae (3).** Rotterdam: Balkema. 191 pp. Noordeloos, M.E., Kuyper, Th.W. & Vellinga, E.C. (eds) (2001). **Flora Agaricina Neerlandica 5. Agaricaceae.** Rotterdam: Balkema. 169 pp.
- Noordeloos, M.E Kuyper, Th.W. & Vellinga, E.C. (Eds) (2005). **Flora Agaricina Neerlandica 6. Coprinaceae & Bolbitaceae.** Taylor & Francis. 227 pp.
- Bernicchia A, (2005). **Fungi Europaei, Volume 10: Polyporaceae s.l. – Edizioni Candusso - 808 pp,**
- Boertmann, D. (1995). **The genus Hygrocybe. Fungi of Northern Europe 1. 184 pp.**
- Bon, M. (1987). **The Mushrooms and Toadstools of Britain and Northwestern Europe.** Hodder & Stoughton. 352 pp.
- Breitenbach, J. & Kränzlin, F. (1984). **Fungi of Switzerland 1. Ascomycetes, Switzerland: Mykologia Luzern. 310pp.**
- Breitenbach, J. & Kränzlin, F. (1986). **Fungi of Switzerland 2. Non-gilled fungi, Heterobasidiomycetes, Aphyllophorales, Gasteromycetes. Switzerland: Mykologia Luzern. 412 pp.**
- Breitenbach, J. & Kränzlin, F. (1991). **Fungi of Switzerland 3. Boletes and agarics, 1st part. Switzerland: Mykologia Luzern. 361 pp.**
- Breitenbach, J. & Kränzlin, F. (1995). **Fungi of Switzerland 4. Agarics, 2nd part. Switzerland: Mykologia Luzern. 368 pp.**
- Breitenbach, J. & Kränzlin, F. (2000). **Fungi of Switzerland 5. Agarics, 3rd Part. Switzerland: Mykologia Luzern. 338 pp.**
- Kränzlin, F. (2005). **Fungi of Switzerland 6. Russulaceae - Russula & Lactarius, Switzerland: Mykologia Luzern. 317 pp.**
- Courtecuisse, R. & Duhem, B. 1995. **Mushroom & Toadstools of Britain and Europe.** HarperCollins.
- Galli, R. (1996). **Le Russule.** Milan: Edinatura. 480 pp.
- Heilmann-Clausen, J., Verbeken, A., & Vesterholt, J. (1998). **The genus Lactarius. Fungi of Northern Europe 2. 287 pp.**
- Holec, J. (2001). **The Genus Pholiota in central and Western Europe. Libri Botanici 20: 1–220.** HRP (2011) Hampton Court Palace Gardens, Estate and Landscape Conservation Management Plan 2011
- Kibby, G. (2000-2008). **Field Mycology Vols. 1-9** Published by Elsevier for the British Mycological Society. PO Box 211, 1000 AE Amsterdam, The Netherlands. An essential resource for articles and photographs of British fungi.
- Kibby, G. (2012). **The Genus Russula in Great Britain. 8th Ed. Digital Science. 109pp.**
- Kibby, G. (2010). **The Genus Boletus in Great Britain. 4th Ed. Digital Science. 109pp.**
- Kibby, G. (2011). **The Genus Amanita in Great Britain. 1st Ed. Digital Science. 109pp.**
- Kibby, G. (2011). **The Genus Agaricus in Great Britain. 1st Ed. Digital Science. 109pp.**
- Kibby, G. (2012). **The Genus Tricholoma in Great Britain. 1st Ed. Digital Science. 109pp.**
- Knudsen, H. and Vesterholt, J. 2008 & 2012. **Funga Nordica. Nordsvamp. 968 pp.** An essential work by 41 mycologists from 16 European countries
- Legon, N.W. & Henrici, A. (2005)

Checklist of the British and Irish Basidiomycota. Published by Kew Gardens. The most up-to-date and essential reference to the British species and their current names.

Christensen, Morten, Clausen-Heilmann, Jacob. (2013) *The Genus *Tricholoma*, Fungi Of Northern Europe, Vol 4-221pp*

Outen, Alan R. and Cullington, Penny. 2011. *Keys to the British Species of Inocybe – July 2011 2nd edition. 72 pp.*

Overall, Andy. (2010) *Field Mycology, Fungi Royale -Volume 11, Issue 3, August 2010, Pages 101-104*

Overall, Andy. (2011) *Field Mycology, Fungi Royale - Volume 12, Issue 1, January 2011, Pages*

26-30

Overall, Andy (2011) *Field Mycology, Fungi Royale - Volume 12, Issue 3, July 2011, Pages 94- 99*

Overall, Andy (2012) *Field Mycology, Exciting Finds from Kenwood and Hampstead Heath Volume 13, Issue 3, July 2012 Pages 93-98*

Overall, Andy (2013) *Field Mycology, Urban Fungi-interesting fungi from parks and gardens of West London – Vol. 14, Issue 3, July 2013, Pages 98-102*

Pegler D N , Laessle T, Spooner B M – 1995 *British Puffballs, Earthstars & Stinkhorns — RBGK*

Phillips R, - (2006) – *Mushrooms – Macmillan 384pp*

Phillips, R. (1981). *Mushrooms and other fungi of Great Britain & Europe. London: Pan Books. 288 pp.*

Rayner, R.W. (2005) *British Fungus Flora. Agarics and Boleti 9. Lactarius. Edinburgh: Royal Botanic Garden. 203 pp.*

Sanchez, Luis. (2008) *Fungi Europaei. Agaricus I. Allopsalliota. Edizioni Candusso. 824 pp.*

Sarnari, M. (1998). *Monografia Illustrata del Genere Russula in Europe (Tomo Primo). Associazione Micologica Bresadola. 799 pp.*

Sarnari, M. (2005). *Monografia Illustrata del Genere Russula in Europe (Tomo Secundo). Associazione Micologica Bresadola. 807–1568 - Via A. Volta, 46 –38100 TRENTO, ITALY.*

Vesterholt, J. (2005). *The genus Hebeloma. Fungi of Northern Europe 3. 146 pp.*

Watling, R. & Hills, A.E. (2005). *British Fungus Flora. Agarics and Boleti 1. Boletes and their allies. Edinburgh: Royal*

Watling, R. & Gregory, N.M. (1989). British Fungus Flora. Agarics and Boleti 6. Crepidotaceae, Pleurotaceae and other pleurotoid agarics. Edinburgh: Royal Botanic Garden. 157 pp.

Watling, R., Gregory, N.M. & Orton, P.D. (1993). *British Fungus Flora. Agarics and Boleti 7. Cortinariaceae p.p. Galerina, Gymnopilus, Leucocortinarius, Phaeocollybia, Phaeogalera, Phaeolepiota, Phaeomarasmus, Pleuroflammula, Rozites and Stagnicola. Edinburgh: Royal Botanic Garden. 131 pp.*

Watling, R. & Turnbull, E. (1998). *British Fungus Flora. Agarics and Boleti 8. Cantharellaceae, Gomphaceae and Amyloid-Spored and Xeruloid Members of Tricholomataceae (excl. Mycena). Edinburgh: Royal Botanic Garden. 189 pp.*

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