

***Hygrophorus marzuolus* (Fr.) Bresad. Found in Wyre Forest, Shropshire, new to Britain.**

John Bingham



01. *Hygrophorus marzuolus* Longdon Wood, Wyre Forest. John Bingham.

Fungi are under-recorded by naturalists and it is perhaps not surprising that new native species are discovered every year as well as many introductions. Most species are obscure or small but not always. It is somewhat unusual to find a large native agaric fungus until now not recorded for Britain. This record was made just over the border with Shropshire but I hope it is of interest to Worcestershire naturalists. The challenge is to find it in Worcestershire.

On 19th January 2022 at Longdon Wood in the Shropshire portion of the Wyre Forest I found a troupe of seven large agaric fungi growing on a steep bank. They all had dark- coloured, nearly black caps 4 - 10cm across with white gills, and they were quite robust and firm. The habitat was under Oak *Quercus petraea* x *robur* = *Q. x rosacea* with bare soil, leaf litter and occasional patches of mosses with scattered Heather *Calluna vulgaris* and Bilberry *Vaccinium myrtillus*. Several photographs were taken in situ for future reference (01, 02).

I first considered the possibly of them being a form of *Tricholoma saponaceum*, a common species in Wyre, but closer examination suggested that they were not this species, so I drew a blank on the identification. A few specimens were collected and although I consulted numerous books only a *Hygrophorus* species seemed a possibility. Images were posted online on the British Mycological Society Facebook web pages where *Hygrophorus marzuolus* was suggested as a possible name by Nicolas Schwab. This did fit with my specimens although they appeared dark when compared to books which showed grey coloured fruitbodies, but this species was not known in Britain. Also, the soil types were all given as calcareous, not acid as in the Wyre Forest. (Breitenbach & Kranzin 1991), (Courtecuisse 1999).



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I contacted Martyn Ainsworth at the Royal Botanical Gardens Kew, Mycological Department who asked for dried specimens for DNA sequencing. The results came back on 25th January 2023 and Martyn confirmed the fungus was indeed *H. marzuolus*, a species not recorded before from Britain. It will be filed as *H. marzuolus*, K-M000265126 and added it to the *Checklist of British Basidiomycota*. (Legon & Henrici 2005).

H. marzuolus is a mycorrhizal fungus and typically grows under conifer trees but occasionally under broadleaf as in the Wyre Forest. Courtecuisse (1999) states it is rare everywhere and mentions it as associated with deciduous as well as coniferous trees on calcareous soils. Fruit bodies grow singly to scattered or sometimes in clusters in moss on the forest floor. In Spain it is regarded as a 'snow-melt' species appearing in late winter or early spring

It would appear this is a native species in this country and may possibly have a restricted distribution in the more acid oak woodlands in the west of Britain. It may well be overlooked due to its appearance in late winter or very early spring months when few people look for larger fungi.

Acknowledgements.

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References.

Breitenbach, J. & Kranzin, F. 199) *Fungi of Switzerland. Boletes and Agarics* 1st part. Vol.3.

Courtecuisse, R. 1999. *Mushrooms of Britain & Europe*. Harper Collins Publishers, London.

Kibby, G. 2020. *Mushrooms and Toadstools of Britain & Europe*. Vol.2. Part 1. Privately Published.

Legon, N.W. Henrici, A. 2005. *Checklist of the British & Irish Basidiomycota*. Kew Publishing. Online Webpage Basidiomycota Checklist - home page

Images

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