Fungal Portrait: 100

Russula blumiana

Geoffrey Kibby

Fig. 1. *Russula blumiana,* appears every year in large numbers under a row of large oaks in Epping Forest, Essex. Photograph © Geoffrey Kibby.

The species shown above, *Russula blumiana* Bon appears in large numbers almost every year along a certain stretch of oaks in Epping Forest, Essex. Both I and my friend and colleague Mario Tortelli have known this species in this spot for over 20 years – but under the wrong name! Attempts to key the species out had led, not entirely satisfactorily, to *Russula maculata*. It sort of 'fitted' the description of that species but not completely. The taste was acrid but lacked the cedar wood component often reported for *R. maculata*. The cap was not as red or as shiny as seen in photos and although often blotchy it lacked the small dark red-brown spots that gave *R. maculata* its specific epithet. But at the time there was nothing else in the available keys at the time that fitted better. So *R.maculata* it remained for many years.

It was only with the advent of publicly accessible DNA sequencing and the aquisition of a Bento Lab by our colleague Claudi Soler that the opportunity presented itself to finally pin down its identity. So it was with great surprise that the resulting sequence was found to be a 99.81% match to several sequences by M. Caboň of *Russula blumiana*. Very few works even mention this species; it is the last species described in the two-volume monograph by Sarnari (1998-2002) and it is painted in the beautiful two volumes by Marxmüller (2014).

We had not considered this species as it is usually considered a thermophilic species of more southern, Mediterranean woodlands. To date Epping Forest is still the only known site in Britain, but perhaps collections elsewhere have also been misidentified and lurk undiscovered in

Fig. 2. Mature specimens of *R. blumiana* bleached by exposure and age. Photograph © Geoffrey Kibby.

herbaria and fungaria. Kew for example has numerous collections of *R. maculata* which might repay further investigation.

The cap when young and fresh is a beautiful bright orange and quite matt in texture. The colour is often rather blotchy with paler areas and over time the entire cap may pale to yellowish ochre as seen in Fig. 2. The gills are pale cream to pale ochre and the spore deposit is medium to dark yellow-orange (IIIa-IVa on Romagnesi's scale, 1985). Its spores are 7.5–9.5 x 6.5–8 µm, with mostly isolated warts up to 1 µm high and a few scattered connectives or connate ridges (Fig. 3). Pileocystidia are abundant, clavate, 0–2 septate, usually not exceeding 8 µm width (Fig. 4). The taste of the gills is strongly acrid.

Both of the works already cited state that it may have a preference for somewhat waterlogged soils and it was noticeable in 2023 that the oaks were frequently surrounded by large puddles of rain water for some time, so there may well be some truth to this idea.

Lookalikes include the very similar *R. aurantioflammans*, a *Betula* associate known from one site in Scotland and the aforementioned *R. maculata* which is usually redder, with a smooth, shiny cuticle and noticeable dark red-brown spots as well as a darker spore deposit of IVc-d.

I would be very interested to hear of any further localities for this beautiful and seemingly rare species.

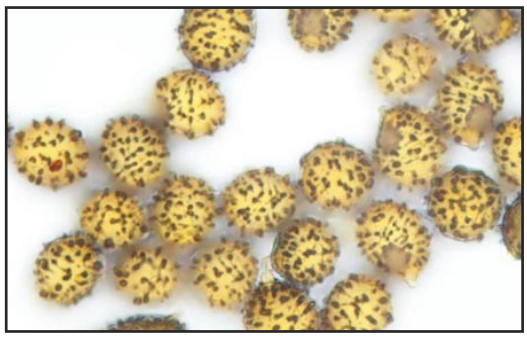

Fig. 3. Spores of *R. blumiana* showing ± isolated warts. Photo © Claudi V. Soler.

Fig. 4. Septate pileocystidia of *R. blumiana.* Photo © Geoffrey Kibby

References

Marxmüller, H. (2014). *Russularum Icones*. Anatis Verlag.

Romagnesi, H. (1985). *Les Russules*. J. Cramer

Sarnari, M. (1998-2005). *Monografia illustrata del Genere Russula in Europa*, Vols 1 & 2. A.M.B. Fondazione Centro Studi Micologici.