Key to lichenicolous fungi known on *Xanthoria* in the UK.

Spring 2020

Species in bold have a species account available.

Marchandiomyces corallinus and ***Taeniolina scripta*** have also been recorded on *Xanthoria* in the UK.

All of these species have been recorded on *Xanthoria parietina* except for *Cornutispora ciliata.*

1. Large areas of damage associated with cobweb-like fungal growth …… ***Athelia arachnoidea***

1. Pink, coral or orange 'blobs' on, or imbedded in, the surface of the host thallus or fruit …… 2

1. Tiny dark bristles, dark hyphal threads or sooty covering present …… 3

1. Galls present …… 4

1. Black dots present …… 6

2. Shocking pink irregular blobs that appear to dissolve in water …… ***Illosporiopsis christensenii***

2. Orange, or coral, slightly irregularly blobs (bulbils) …… ***Erythricium aurantiacum***

2. Pink spherical structures covered in white hairs and with a red spot …… *Nectriopsis physciicola*

2. Orangey spots imbedded in the surface of the thallus or fruit …… *Pronectria xanthoriae*

3. Black, sooty coating mainly on the top of the host fruits …… ***Xanthoriicola physciae***

3. Dark bristles on host fruits (thallus of host often bleached) …… ***Cladosporium licheniphilum***

3. Clusters of dark bristles growing from black dots in or on host thallus or fruit …… *Pyrenochaeta xanthoriae*

3. Fuzzy brown coating on thallus and fruits of host …… ***Gonatophragmium lichenophilum***

4. Galls yellow and flat, often looking like a three-cornered hat …… ***Telogalla olivieri***

4. Galls mounded with immersed black dots …… 5

    5. Spores with two cells …… *Zwackhiomyces coepulonus*

    5. Ascospores single celled …… ***Telogalla olivieri***

6. Back dots contain asci …… 7

7. Asci arranged in a layer on the surface of a fruiting body – apothecia …… 8

8. Apothecia very irregular, often with more than one cavity when seen in cross-section

…….. ***Opegrapha physciaria***

8. Apothecia without a margin. Ascus-bearing tissue on sides as well as top of apothecia …….. 9

9. Apothecia in large clusters …… ***Arthonia parietinaria***

9. Apothecia in groups of 5 or fewer …… *Arthonia molendoi*

7. Asci enclosed in a fruiting body – perithecia …… 10

10. Perithecia pale-walled in cross-section …….. ***Telogalla olivieri***

10. Perithecium dark-walled in cross-section …… 11

11. Ascospores colourless …… *Zwackhiomyces coepulonus*

11. Ascospores brown …… 12

12. Infected areas stained red. Ascospores with warts

…… ***Didymocyrtis slaptoniensis***

12. Infected areas bleached. Ascospores with smooth walls

…… ***Sphaerellothecium parietinarium***

6. Black dots contain conidia. No asci present …… 13

13. Black dots with dark bristles …….. *Pyrenochaeta xanthoriae*

13. Black dots without dark bristles …….. 14

14. Conidia brown …….. ***Lichenoconium xanthoriae***

14. Conidia colourless …… 15 (4 options)

15. Conidia with three arms …….. *Cornutispora ciliata*

15. Conidia extremely long and narrow, often curved …… *Epithamnolia xanthoriae*

15. Conidia rod-shaped …… ***Opegrapha physciaria***

15. Conidia ellipsoid …… 16

16. Conidia mainly 4.6-6.4 x 2.5-3.1 µm …….. ***Didymocyrtis slaptoniensis***

Note: There appears to be a second form of *Didymocyrtis* on *Xanthoria parietina* in the UK. This species is often recorded as *Didymocyrtis epiphyscia s. lat.* It is only known in its conidial form. Conidia are less than 6.5 x 3.0 µm. Spore sizes should be given when making records.

16. Conidia much smaller ……

…… ***Arthonia parietinaria***, *Arthonia molendoi* or pycnidia of the host