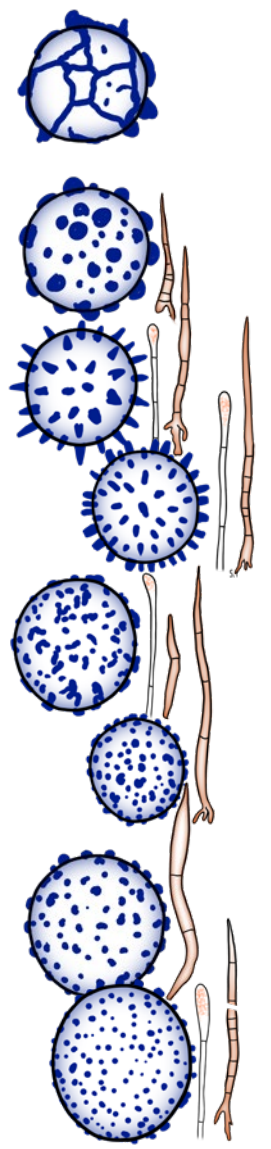
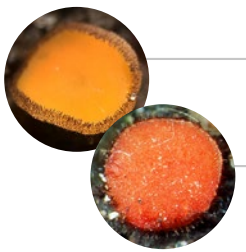
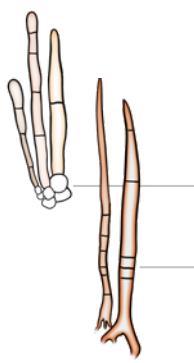


Key G – *Scutellinia* and others with orange-reddish hymenium and projecting, darker hairs

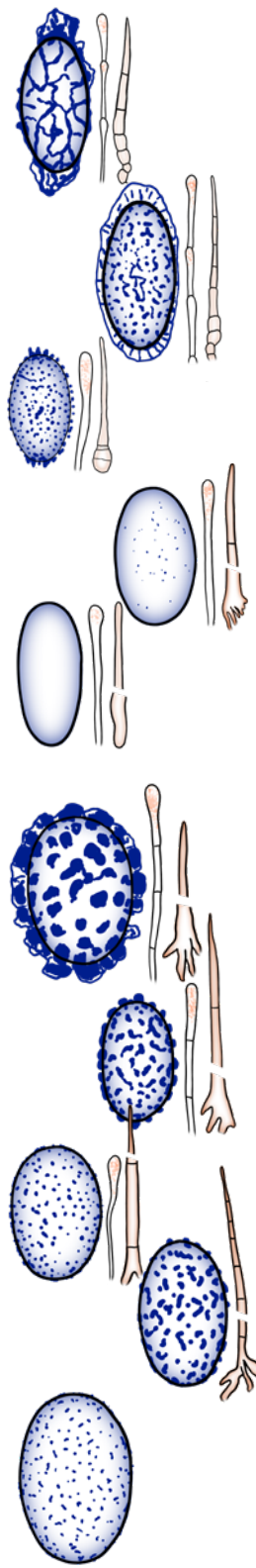
Colouring with cotton blue is necessary to describe the spore ornament, but the spores must be measured in water, as they shrink considerably in CB.

With stellate, projecting hairs, see *Cheilymenia*.

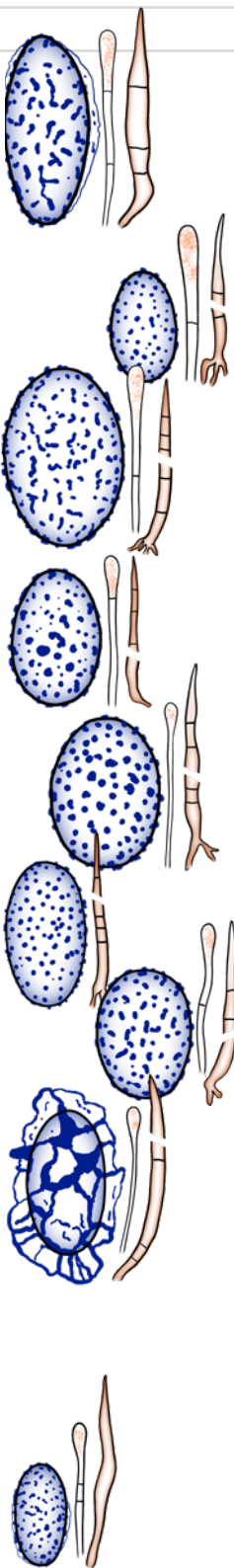
1. End cell of the hairs with a ± rounded tip; spores with a reticulate ornament; hairs up to 350 µm long, not rooting 2
 see *Melastiza* and others, key XX
2. End cell of the hairs tapering towards the acute tip; spores reticulate, warty or smooth; hairs often longer, mostly rooting 2
3. Spores ± globose to subglobose (Q=1-1.15) 3
 Spores ellipsoid to fusiform 10
4. Spores with a 2.5-4 µm high, coarse reticulum. Disc 3-8 mm wide, orange to reddish; margin with dense, 135-650 (-840) µm long, brown, 2-3-rooted hairs; spores 16-18 µm wide; on soil *Scutellinia rotundisperma* 4
 Spores with warts, spines or a low reticulum 4
5. Spores with (1.5-) 2-5 µm high spines 5
 Spores with lower warts 7
6. Spores with 2-4.5 µm high, rounded warts. Disc 1-2.2 mm wide, reddish margin with moderately crowded, 600-1000 µm long, brown, 2-3-rooted hairs; spores 15-19 µm wide; on soil *Scutellinia sinensis* 6
 Spores with pointed or truncate spines 6
7. Spores with pointed spines; marginal hairs up to 100-800 µm long. Disc 1-5 mm wide, orange to reddish margin with dense, brown, 2-3-rooted hairs; spores 15.5-18.5 µm wide, with 2-6 µm high spines; on soil *Scutellinia legaliae* 6
 Spores with truncate spines; marginal hairs 400-1950 (-2100) µm long. Disc 1.5-9 mm wide, reddish; margin with dense, brown, 2-3-rooted hairs; spores 15-17.5 µm wide, with 1.5-4 µm high spines; on soil *Scutellinia trechispora* 6
8. Marginal hairs 80-130 µm long; spores with sinuose warts. Disc 0.5-2.5 mm wide, reddish; margin with pale brown, 80-130 µm long, 1-rooted hairs; spores 15-21 µm wide, with up to 1.4 µm high sinuose warts; on soil *Scutellinia peloponesiaca* 8
 Marginal hairs longer; spores with round or truncate warts 8
9. Spores 14-16.5 (-19) µm with 1-2 µm high, truncate warts; marginal hairs often with 2-3 roots. Disc 3-8 mm wide, reddish; margin with brown, 200-500 µm long hairs; on soil *Scutellinia minor* 9
 Spores more than 18 µm wide, with rounded warts; marginal hairs with 1-2 roots 9
10. Marginal hairs up to 400 µm long, mostly 1-2-septate; mainly southern. Disc 3-10 mm wide, apricot-orange to reddish; margin with brown, 100-400 µm long, 1-rooted hairs; spores 18-22 µm wide, with up to 1.8 µm high warts; on soil *Scutellinia barlae* 9
 Marginal hairs up to 700 µm long, with up to 10 septae; mainly boreal or arctic. Disc 2-6 mm wide, apricot-orange to reddish; margin with brown to greyish brown, 100-700 µm long, 1-3-rooted hairs with paler tips; spores 19-23.5 µm wide, with up to 1 µm high warts; on soil *Scutellinia hyperborea* 9
11. Hairs very pale, typically not divided and rooted at the base 11
 Hairs yellowish brown, orange-brown, to reddish brown, 1-2-multi-rooted 14



11. Hairs almost white/hyalin see key J XX
 Hairs obviously brown 12
12. Spores with an up to 1.5 µm high, reticulate ornament. Disc 5-15 mm wide, apricot-orange; margin with pale brown, 160-410 µm long hairs; spores 18.5-23 x 8.5-9.5 µm; paraphyses constricted above the septae; on wood and debris including conifer needles *Spooneromyces helveticus* 12
 Spores with a labyrinthine or warty ornament 13
13. Spores 16-23.5 x 8-10.5 µm, with an ornament of labyrinthine warts. Disc 4-10 mm wide, clay-pink, salmon, apricot-orange to orange; margin with pale brown, 50-480 µm long hairs; paraphyses constricted above the septae; on debris, especially under coniferous trees *Spooneromyces laeticolor* 13
 Spores 14-17 x 7-8 µm, with an ornament of scattered, round warts. Disc 3-9 mm wide, clay-pink, salmon, apricot-orange to orange; margin with pale brown, 100-400 µm long hairs; on debris and burned places *Spooneromyces velenovskiji* 13
14. Mature spores smooth 15
 Mature spores ornamented with warts, spines or reticulum 17
15. Marginal hairs 450-900 x 15-30 µm. Disc 1-4 mm wide, ± apricot-orange; margin with brown hairs; spores 18-20.5 x 10-12.5 µm; on wood *Scutellinia setosa* 16
 Marginal hairs smaller 16
16. Spores 18-23 x 10-13.5 µm. Disc 1-4 mm wide, ± apricot-orange to orange; margin with brown, 150-300 µm long, 1-rooted hairs; on soil (southern) *Spaniodiscus fuckelii* 16
 Spores 24-29.5 x 12.5-15.5 µm 16
 see *Parascutellinia carneosanguinea* key XX, cp. xxx
17. Longest marginal hairs 1100-2000 µm long 18
 Marginal hairs shorter than 1100 µm 21
18. Spores ornamented by 1-3.3 µm high, truncate warts. Disc 4-11 mm wide, scarlet; margin with brown, 400-1600 µm long, 3-many-rooted hairs; spores 19-23 x 13.5-18 µm large; mostly on wood *Scutellinia decipiens* 19
 Spores with a lower ornament 19
19. Spores with large, up to 1.5 µm high, sinuate warts almost forming a reticulum. Disc 2-6 mm wide, coral to scarlet; margin with brown, 200-2000 µm long, 3-many-rooted hairs; spores 17-20 x 10-11.5 µm large; mostly on wood *Scutellinia colensoi* 20
 Spores with less prominent warts 20
20. Spores with very tiny, up to 0.6 µm high warts; spore-Q-av. below 1.6. Disc 3-8 mm wide, coral to scarlet; margin with brown, 300-2000 µm long, 2-many-rooted hairs; spores 16.5-22 x 10.5-14 µm large; mostly on wood *Scutellinia crinita* 20
 Spores with slightly larger, up to 1 µm high, sinuate warts; spore-Q-av. above 1.6. Disc 4-11 mm wide, coral to scarlet; margin with brown, 360-1600 µm long, 3-many-rooted hairs; spores 17.5-23 x 10.5-13 µm large; on soil, debris and wood *Scutellinia scutellata* 20
21. Longest marginal hairs 600-1100 µm long 22
 Marginal hairs shorter than 600 µm 29
22. Spores with very low, up to 0.3 µm high ornamentation of sinuose warts. Disc 3-12 mm wide, coral to apricot-orange; margin with brown, 600-1000 µm long, 2-many-rooted hairs; spores 21-27.5 x 13.5-16.5 µm large; on wood *Scutellinia pilatii* 22
 Warts up to at least 1 µm 23



23. Spores ± fusiform; spores ornamented by long and sinuose warts; with a loosening perispore. Disc 3-8 mm wide, ± scarlet; margin with brown, 200-1100 µm long, 1-2-rooted hairs; spores 23.5-28 x 11.5-15 µm large, with low, sinuose warts; on soil *Scutellinia mirabilis*
Spores ± ellipsoid; ornamentation mostly diferent; perispore not loosening 24
24. Spores 15.5-19.5 x 9.5-12 µm. Disc 1-5 mm wide, brownish red; margin with brown, to 300-1000 µm long, 2-multi-rooted hairs; spores 15.5-19.5 x 9.5-12 µm large, with up to 1.2 µm high, round warts; on soil, debris and wood *Scutellinia vitreola*
Spores on average more than 19 x 12 µm 25
25. Spores with sinuose warts or crests. Disc 3-20 mm wide, scarlet; margin with brown, to 150-1000 µm long, 2-multi-rooted hairs; spores 19.5-27 x 13-17.5 µm large, with up to 1.2 µm high, sinuose warts; on soil *Scutellinia olivascens*
Spores with rounded warts 26
26. Spores with both small and large, up to 1.5 µm high warts; hairs 1-2-rooted. Disc 3-15 mm wide, apricot-orange to scarlet; margin with brown, to 800 µm long hairs; spores 19-22 x 11-13.5 µm large, with up to 1.5 µm high, round warts mixed with smaller; on soil and debris *Scutellinia heterosculpturata*
Spores with more uniform ornamentation; hairs 2-many-rooted 27
27. Spores with up to 2 µm high warts. Disc 3-8 mm wide, brownish red to scarlet; margin with brown, to 200-1000 µm long, 2-multi-rooted hairs; spores 17-25 x 13-20 µm large, with round warts; on debris including herbs *Scutellinia umbrorum*
Warts up to 1.2 µm high 28
28. Hairs with 1-3 furcate base; spore-Q higher than 1.4. Disc 3-7 mm wide, coral to scarlet; margin with brown, to 150-650 (-950) µm long, 1-3-rooted hairs; spores 17.5-23.5 x 12-15 µm large, with up to 1.1 µm high, ± round warts; on soil and debris *Scutellinia subhirtella*
Hairs with many-furcate base; spore-Q 1.2-1.3. Disc 2-10 mm wide, apricot orange; margin with brown, to 200-1000 µm long, 1-many-rooted hairs; spores 18-23 x 13.5-18.5 µm large, with up to 1.2 µm high, ± round warts; on soil and debris *Scutellinia patagonica*
29. Spores with 1.6-4.3 (-6) µm high crests, forming a reticulum. Disc 1.5-4 mm wide, apricot orange to scarlet; margin with brown, to 120-280 µm long, 1-2-rooted hairs; spores 19-24 x 10-13.5 µm large; on soil *Scutellinia pseudotrechispora*
Spores with lower, round or sinuose warts 30
30. Spores on avarage less than 20 µm long 31
Spores on avarage more than 20 µm long 37
31. With basally stellate hairs; spores 15.5-18 x 7-10 µm with a semireticulate pattern and much higher ornament at the ends see *Cheilymenia crucipila*, key XX
Without stellate hairs, but hairs often with multible roots; spores diferent 32
32. Spores 13-16 x 7-9 µm with very small, to 0.3 µm high, sinuose warts. Disc 0.5-4 mm wide, apricot orange to brownish red; margin with brown, to 50-170 µm long, 1-2-rooted hairs; on soil *Scutellinia minutella*
Spores larger and with more conspicuous ornament 33



33. Spores with a loosening perispore; spore ornament of low, up to 0.6 µm high, sinuose warts. Disc 2-8 mm wide, apricot orange; margin with brown, to 100-320 (-400) µm long, 2-3-rooted hairs; spores 15.5-19 x 8-11.5 µm large; on soil *Scutellinia torrentis*
Spores without a loosening perispore; spore ornament identical or higher 34
34. Spores with up to 0.7 µm high, sinuose warts. Disc 2-4 mm wide, brownish red; margin with brownish, 300-600 µm long, 3-multirooted hairs; on wood *Scutellinia subcervorum*
Spores with at least up to 1.1 µm high, round warts 35
35. Spores 17.5-23.5 x 12-15 µm large, with up to 1.1 µm high, ± round warts; hairs up to 600 µm long see *Scutellinia subhirtella* cp. 28xx
Spores smaller and with higher warts; hairs to 410 µm long 36
36. With 75-140 µm long, 1-3-celled, pale brown hairs. Disc 1-4 mm wide, apricot orange; hairs 1-rooted; spores 15-20 x 9-13.5 µm large, with up to 1.2 µm high, ± round warts; on soil *Scutellinia ahmadii*
With 100-410 µm long, many-celled, brown hairs. Disc 3-5 mm wide, apricot orange to reddish; hairs 1-rooted; spores 16.5-19.5 x 11-14 µm large, with up to 1.4 µm high, ± round warts; on soil *Scutellinia parvispora*
37. Spores with up to 1.3 µm high, round warts 38
Spores with up to 0.5 mm high, ± sinuose warts 39
38. Spores 17.5-23.5 x 12-15 µm large, ellipsoid, Q 1.4-1.6 see *Scutellinia subhirtella* cp. 28xx
Spores 22-26 x 10-14 µm large, ellipsoid to subfusiform, Q 1.8-2.2. Disc 3-14 mm wide, coral to scarlet; hairs to 500 (-550) µm long, 2-many-rooted; spores with up to 1.3 µm high, round warts; on soil, debris and wood *Scutellinia cejpaii*
39. Spores on average longer than 26 µm, ± fusiform. Disc 2-8 mm wide, brownish red to scarlet; hairs brown, 100-400 µm long, 1-3-rooted; spores 25-30 (-36) x 12-15 (-16) µm large, with low, up to 0.4 µm high, oblong warts; on soil *Scutellinia macrospora*
Spores on avarage shorter than 26 µm, ± ellipsoid 40
40. With a loosening perispore when heated in cotton blue. Disc 2-6 mm wide, apricot orange to brownish red; hairs brown, 60-360 µm long, 1-3-rooted; spores 19-24 x 11-16 µm large, with low, up to 0.5 µm high, irregular warts; on soil *Scutellinia superba*
Without a loosening perispore 41
41. Spores with an ornament of small, sinuate warts which in some places almost for a reticulum; hairs macroscopically brown. Disc 4-15 mm wide, ± scarlet; hairs 130-500 µm long, 1-2-rooted; spores 22-28 x 14.5-22 µm large, with low, up to 0.3 µm high warts; on soil; northern/alpine *Scutellinia kerguelensis*
Spores with an ornament of small, sinuate, isolated warts; hairs macroscopically almost black. Disc 4-10 mm wide, ± scarlet; hairs 150-420 µm long, 1-2-rooted; spores 19.5-26.5 x 14-16.5 µm large, with low, up to 0.4 µm high warts; on soil *Scutellinia nigrohirtula*

