

THELOTREME KEY

Natural Key

After Hale (1981) and Harris (1990)

1. Growing on rock, soil, moss, or other lichens.
Diploschistes

1. Growing on bark or wood (or rarely rocks, in humid situations).
Photobiont (mostly?) Trentepohlia. 2

2. Ascoma a mazaedium. Nadvornikia

2. Ascoma an apothecium. 3

3. Upper hymenium and ascus sheath I+ blue-green; paraphyses somewhat anastomosed below, strongly so above the asci.
"Ocellularia" stictidea (Nyl.) Vezda ex Gilenstam

3. Upper hymenium and ascus sheath I-; paraphyses mostly simple. 4

4. Exciple with periphysoids on the inner face; columella always lacking. Thelotrema

4. Exciple without periphysoids; columella present or absent. 5

5. Exciple hyaline to pale reddish brown; columnar structures, if present, noncarbonized. Myriotrema

5. Exciple carbonized and friable; carbonized columella often present. Ocellularia

**Artificial Key to Species of
Thelotrema, Myriotrema, and Ocellularia**

Bruce Ryan

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(For more detailed info., see natural keys to the species in these genera)

1. Spores submuriform to densely muriform. 2
1. Spores transversely septate. 20
 2. Spores brown. 3
 2. Spores hyaline. 6
3. Spores 1-2/ascus, 70 um or more long. 4
3. Spores 8/ascus, mostly shorter. 5
 4. Spores 70-130 x 20-30 um. Thallus P+ orange. Myriotrema reclusum
 4. Spores 105-140 x 24-30 um. Thallus P-. Thelotrema monospermum
5. Thallus isidiate. Thelotrema santense
5. Thallus not isidiate. 6
 6. Thallus P-. 7
 6. Thallus P+ yellow, orange, or red. 8
7. Spores 8-11 um wide. Thallus without red pigment. Ocellularia retispora
7. Spores 10-14 um wide. Thallus usually with pockets of bright red pigment. Myriotrema wightii
 8. Thallus P+ yellow (psoromic acid). Ocellularia fissa
 8. Thallus P+ orange or red. 9
9. Thallus K-, P+ red (protocetraric acid). Myriotrema bahianum
9. Thallus K+ yellow, P+ orange (stictic acid agg.). 10
 10. Ascomata angular, crowded. Myriotrema glaucescens
 - 10 Ascomata rounded, not crowded. 11
11. Norstictic acid absent. Myriotrema subcompunctum
11. Norstictic acid present. Myriotrema compunctum

- 12. Spores large, over 50 um long, 1-4/ascus. 13
- 12. Spores under 50 um long, usually 8/ascus. 17
- 13. Spores 1-2/ascus. 14
- 13. Spores 2-4/ascus. 16
- 14. Spores 50-80 x 15-20 um. Thallus P-. Thelotrema leprocarpum
- 14. Spores over 100 um long. 15
- 15. Thallus P-. Ocellularia sanfordiana
- 15. Thallus P+ orange. Ocellularia praestans
- 16. Apothecia immersed when young, becoming urceolate with low, thick, margin; exciple coarse, pinkish tan, often filling pore and covering the disk. Thelotrema adjectum
- 16. Apothecia with large, open pore; margin regular, thinner; exciple fragile, whitish, free from margin. Thelotrema lepadinum
- 17. Spores under 25 um long. 18
- 17. Spores 25-35(-45) x 12-15 um. Thelotrema defectum
- 18. Thallus isidiate. Spores 15-21 x 9-12 um. Thelotrema halei
- 18. Thallus not isidiate. Spores to 8 um wide. 19
- 19. Spores 9-20 x 4-6 um. Myriotrema rugiferum
- 19. Spores 18-25 x 6-8 um. Myriotrema peninsulae
- 20. Spores brown. 21
- 20. Spores hyaline. 23
- 21. Spores 2-celled. Thelotrema eximium
- 21. Spores 4- or more-celled. 22
- 22. Spores 7-11-celled Thelotrema lacteum
- 22. Spores 4-celled. Ocellularia leiostoma
- 23. Spores over 100 um long. 24
- 23. Spores under 50 um long. 25
- 24. Spores 120-140 x 15-20 um. Thelotrema porinoides
- 24. Spores 100-130 x 20-35 um. Ocellularia americana
- 25. Spores over 25 um long. 26
- 25. Spores under 25 um long. 31
- 26. Medulla P+ yellow, orange, or red. 27

26. Medulla P-. 29
27. Medulla P+ yellow (psoromic acid). Spores 6-8-celled, 25-32 x 9-11 um. Ocellularia sp.
27. Medulla P+ red or orange. Spores under 9 um wide. 28
28. Medulla P+ red (cinchonarum unknowns). Spores 9-11-celled, 27-37 x 7.5-8.5 um. Ocellularia cavata
28. Medulla P+ orange (stictic acid agg.) Spores 7-10-celled, 30 x 6-8 um. Thelotrema dilatatum
29. Spores IKI+ purple. 30
29. Spores IKI-, 11-14-celled, 24-38 x 6-7 um. Thallus P-. Thelotrema cf. alborosellum
30. Apothecia 0.4-0.6 mm across; thallus poorly developed, ecorticate; medulla not obvious. Thelotrema subtile
30. Apothecia 0.2-0.35 mm across; thallus usually well developed, weakly corticate; medulla thick. Thelotrema lathraeum
31. Medulla P+ yellow (psoromic acid). 32
31. Medulla P-. 34
32. Spores 6-8-celled, 17-24 x 6-7 um. Ocellularia granulosa
32. Spores mostly fewer than 6-celled, less than 17(-18) um long. 33
33. Spores (3-)4-celled, 9-15 x 4-7 um. Myriotrema terebratulum
33. Spores 4-6-celled, 13-18 x 6-7 um. Thelotrema floridense
34. Spores 13-17 x 6-7 um. Ocellularia sp.
34. Spores 10-12 x 5-6 um. Cortex UV+ yellow. Myriotrema glauculum
- ADD: Thallus sorediate, usually sterile, P+ red (protocetraric acid). Myriotrema erodens

