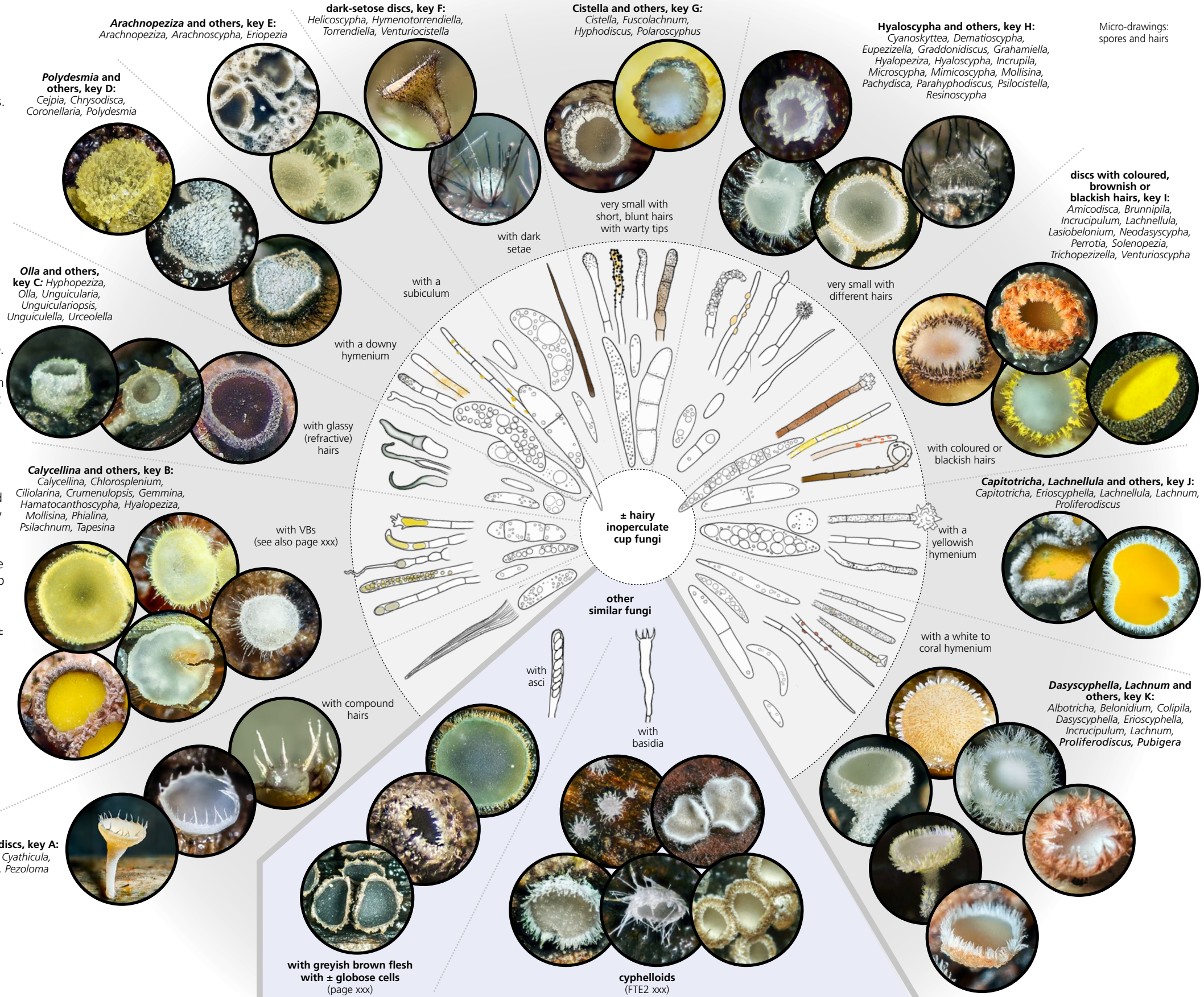
Downy to hairy inoperculate cup fungi

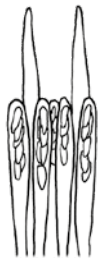
This form group of small inoperculate cup fungi has the flank and especially the margin covered by projecting hairs. They are mainly decomposers and occur predominantly on herbaceous stems, fallen leaves, cones and wood.

The group contains many genera, and the appearance of the hairs (the shape, size, colour, crystal-covering, guttulation, *etc.*) is a very important distinguishing character. Identification almost always requires the use of a microscope.

The majority of the species are classified within the *Arachnopezizaceae*, the *Hyaloscyphaceae*, the *Hyphodiscaceae*, the *Lachnaceae* and the *Solenopezizaceae*. A number of the species in the *Lachnaceae* have long paraphyses with lanceolate or tapering tips that project above the asci (see figure below).

Other similar fungi:
– cyphelloid fungi (FTExxx) have small, hanging fruitbodies. They are *basidiomycotes* and can be recognized by their basidia and spore morphology with spores having a small appendage (apiculus) where they were attached to the sterigmata. They are often more shaggy than the hairy inoperculate cup fungi with are more disorderly hairs.
– Some Mollisiaceaae also have hairs, but they have greyish-brown flesh of ± globose cells, see xxx.





A typical hymenium in the genus *Lachnum* with asci and lanceolate, projecting paraphyses.



Key to groups of downy to hairy inoperculate cup fungi

1. Hairs well defined teeth formed by bundles of parallel, agglutinated hyphae . . . . . **coronate discs, key A**
Hairs of singular or slightly agglutinated cells or cell rows 2

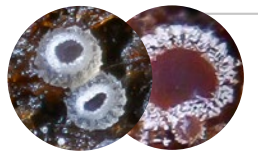


2. With greyish or brownish flesh formed by brownish, ± globose cells (textura globulosa) 3
Flesh different 4

3. Paraphyses with oblong VBs . . . . . *Mollisia* and *Niptera*, page xxx [?*Chlorosplenium*, *Gelatinomollisia*, *Involucroscypha*, *Patellariopsis*]
Paraphyses without or with small globose VBs . . . . . *Dennisiodiscus*, *Lasiomollisia*, *Pirottaea*, *Pyrenopeziza*, etc., page xxx

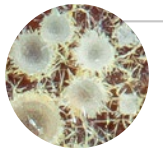


4. Living paraphyses and mostly also hairs seen in water with obvious hyaline or yellowish VBs . . . . . ***Calycellina* and others, key B**
Living paraphyses and hairs without obvious VBs 5

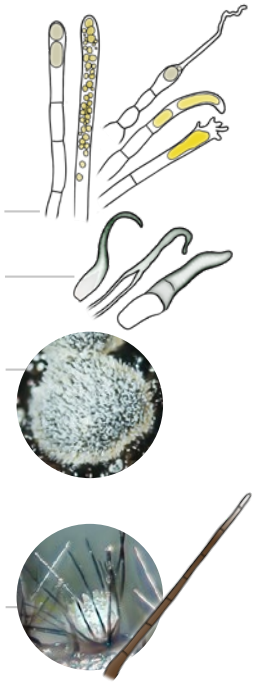


5. Hair tips or walls glassy (refractive) . . . . . ***Olla* and others, key C**
Hairs not glassy 6

6. Hymenium downy by protruding paraphyses; fruitbodies sessile . . . . . ***Polydesmia* and others, key D**
Hymenium ± smooth *and/or* fruitbodies stipitate 7



7. With a subiculum of loosely woven hyphae, sometimes only seen as a fluffy hyphal disc below the fruitbodies . . . . . ***Arachnopeziza* and others, key E**
Without a subiculum 8

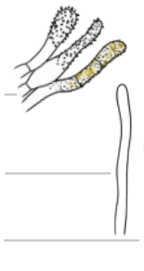


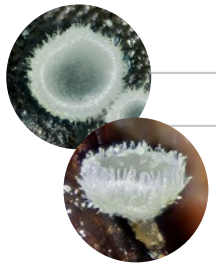
8. Fruitbodies with macroscopically stiff, blackish setae, in the microscope seen as dark brown, straight and thickwalled hairs . . . . . **dark-setose discs, key F**
Not with such hairs 9



9. Fruitbodies very small (mostly 0,1-0,8 mm wide); sessile or short stemmed 10
Fruitbodies larger *and/or* long-stemmed (higher than wide) 12

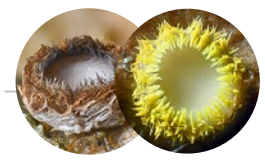
10. Hairs blunt, 15-60 (-150) µm long with finely warty tips . . . . . ***Cistella* and others, key G**
Hairs different 11



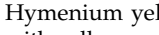
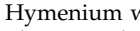


11. Paraphyses tips cylindrical to clavate; fruitbodies mostly sessile to short stipitate . . . . . ***Hyaloscypha* and others, key H**
Paraphyses tips lance-shaped; fruitbodies mostly stipitate . . . . . ***Dasyscyphella*, *Lachnum* and others, key K**

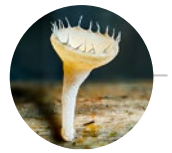
12. With macroscopically blackish, brownish, violet, orange or yellowish hairs, in the microscope either coloured or hyaline with brownish, orange to yellow encrustations or goo . . . . . **discs with coloured or blackish hairs, key I**
With whitish hairs 13





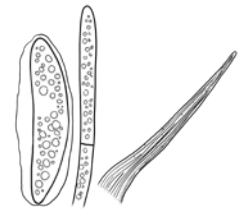
13. Hymenium yellow or orange (); paraphyses with yellow or orange guttules . . . . . ***Capitotricha*, *Lachnellula* and others, key J**
Hymenium white, cream, buff or coral (); paraphyses without or with ± hyaline guttules or rarely with strongly refractive VBs . . . . . ***Dasyscyphella*, *Lachnum* and others, key K**

Key A – coronate discs



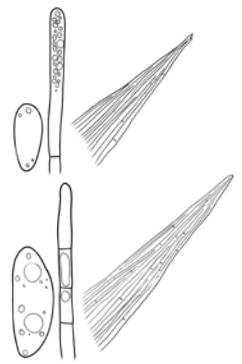
1. Fruitbodies obviously stemmed 2
Fruitbodies ± sessile 4

2. Fruitbodies more than 2 mm wide; spores 15-19,5 µm long. Fruitbody 2-5 wide and 3-6 mm high; hymenium depressed, buffish; asci IKI+ (blue), 70-110 x 6-8 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 15-19,5 x 3,5-4,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 50-80%, with a surrounding slime coating; paraphysis tips cylindrical, with numerous guttules; marginal hairs 300-400 µm long, hyaline, smooth; on mono- and dicot stems; summer–autumn–winter; common . . . . . ***Cyathicula coronata***
Fruitbodies less than 1 mm wide; spores shorter 3



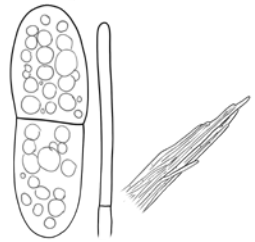


3. On roots; spores 6-8 µm long. Fruitbody 0,2-0,4 wide and 0,5-1 mm high; hymenium depressed, whitish; asci IKI+ (blue), 35-40 x 5-6 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 6-8 x 2,5-3 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical, with numerous guttules; marginal hairs 35-50 µm long, hyaline, heavily encrusted by a yellow substance; known from *Alnus* roots; summer–autumn–winter; rare or overlooked . . . . . ***Cyathicula microspora***
On dead leaves; spores 9,5-13,5 µm long. Fruitbody 0,2-0,3 mm wide; hymenium depressed to flat, whitish; asci IKI+ (blue), 65-90 x 7-9,5 µm, 8-spored; spores drop- to spindle-shaped, 9,5-13,5 x 3-4 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 25%; paraphysis tips cylindrical; marginal hairs 80-150 µm long, hyaline, smooth; known from dead leaves of *Populus* and *Quercus*; autumn-winter; rare or overlooked . . . . . ***Calycina asteroscypha* nom. prov.**[1]



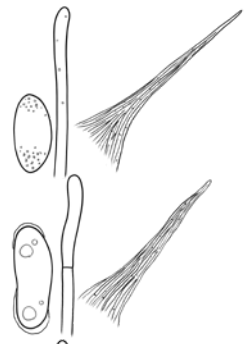
4. On mosses or muddy debris; apical apparatus red in lugol (IKIrb) . . 5
On dead leaves or wood; apical apparatus I- or blue in lugol (IKIbb) 7

5. Spores longer than 18 µm. Fruitbody 0,7-1,5 mm wide, sessile; hymenium depressed to flat, whitish; asci 105-145 x 14-19 µm, 8-spored, with croziers; spores spindle-shaped, 20,5-30 x 7-9 µm, Qav. ≈ 3, smooth, 1-2-celled, oil contents ≈ 50-80%; paraphysis tips cylindrical; known from living *Sphagnum*; summer; rare or overlooked . . . . . ***Pezoloma scanicum***
Spores shorter 6





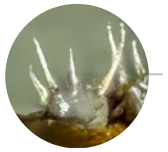
6. On the liverworth *Marchantia polymorpha*; spores 6-9,5 µm long. Fruitbody 0,5-2 mm wide; hymenium depressed to flat, whitish; asci 65-105 x 7,5-10 µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 6-9,5 x 3,5-4,5 µm, Qav. ≈ 1,9, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical; on living *Marchantia polymorpha*; spring–summer; rare or overlooked . . . . . ***Pezoloma marchantiae***
On muddy debris; spores 8-13 µm long. Fruitbody 0,5-5 (-10) mm wide; hymenium depressed to flat, whitish; asci 70-130 x89-10 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 8-13 x 3,5-5,5 µm, Qav. ≈ 2,3, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips cylindrical; on muddy debris with herbal remnants; spring–summer–autumn; rare or overlooked . . . . . ***Pezoloma ciliifera***



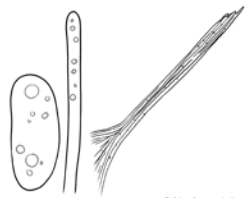
7. On wood or resin; asci less than 50 µm long. Fruitbody 0,2-0,6 mm wide; hymenium arched, whitish; asci I-, 35-45 x 9,5-10,5 µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 11-14 x 2,5-3,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical; marginal hairs 80-150 µm long, hyaline, smooth; known from *Picea*; spring–summer; rare or overlooked . . . . . ***Echinula resinicola* nom. prov.**
On dead leaves; asci longer 8



1. This taxom may include a number of similar species on leaves of e.g. *Fraxinus* and *Viburnus*.



8. On *Rubus*. Fruitbody 0,1-0,2 mm wide; hymenium arched, hyaline to whitish; asci IKI+ (blue), 60-75 x 12-13 µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 10-14 x 5-7 µm, Qav. ≈ 2, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips cylindrical; marginal hairs 200-350 µm long, hyaline, smooth; known from dead leaves of *Rubus fruticosus* and *Rubus chamaemorus*; spring–summer–autumn; rare or overlooked ***Echinula asteriadiformis***
On other hosts 9



9. On *Vaccinium*. Fruitbody 0,2-0,6 mm wide; hymenium arched, hyaline to whitish; asci I-, 100-125 x 15-16,5 µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 13,5-15,5 x 5,5-6,2 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical; marginal hairs 300-500 µm long, hyaline, smooth; known from *Vaccinium uliginosum*; summer to spring; rare or overlooked ***Echinula vaccinii* nom. prov.**
On other hosts 10



10. On *Filipendula*; spores shorter than 11 µm. Fruitbody 0,1-0,2 mm wide; hymenium arched, hyaline to whitish; asci IKI+ (blue), 60-70 x 9-10 µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 7-10 x 3,5-4,5 µm, Qav. ≈ 2,1, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical; marginal hairs 55-100 µm long, hyaline, smooth; spring–summer; rare or overlooked ***Echinula filipendulae* nom. prov.**
On *Geum*; spores longer than 11 µm. Fruitbody 0,1-0,2 mm wide; hymenium arched, hyaline to orange; asci IKI+ (blue), 75-80 x 17-18 µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 12-15 x 5,5-6,5 µm, Qav. ≈ 2,3, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical; marginal hairs 60-90 µm long, hyaline, smooth; summer to spring; rare or overlooked ***Echinula geum* nom. prov.**

Key B – hairy discs with large VBs (*Calycellina, Psilachnum*, etc.)

Calycellina, Hamatocanthoscypha: hairs flagellate, bend or hooked
Mollisina: hairs branched
Psilachnum: hairs ± cylindrical
Gemminia, Ciliolarina: hairs cylindrical to broadly clavate, ± warty

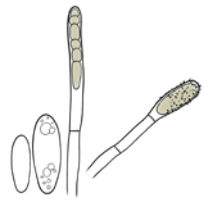
1. Hairs blunt and finely warty (± *Cistella*-like, but with VBs) [*Ciliolarina, Gemmina*] 2
Hairs different 8

1a. Hymenium downy by protruding paraphyses see *Coronellaria*, Gxx
Hymenium ± smooth 11

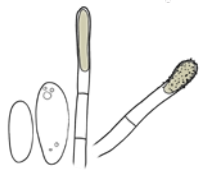
1b. Hairs longer than 30 µm see *Lachnum* and others, key K
Hairs shorter than 30 µm 2



2. On leaves or bud-scales of *Populus*. Fruitbody 0,3-1 mm wide; hymenium depressed, whitish; asci IKI+ (blue), 45-75 x 5,5-7 µm, 8-spored, with croziers; spores spindle-shaped, four small (6,5-7 x 2,3-2,4 µm) and four large (8-9 x 2,9-3,2 µm), Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs 10-20 µm long; rare or overlooked ***Gemmina gemmarum***
On wood and needles of conifers 3



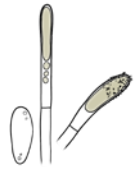
3. On needles of *Juniperus*. Fruitbody 0,2-0,8 mm wide, with a long stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 35-50 x 7-8 µm, 8-spored, with croziers; spores spindle-shaped, four small (6-7 x 2-2,5 µm) and four large (7-9 x 3-3,7 µm), Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs 10-25 µm long; rare or overlooked ***Gemmina junipericola***
On wood 4



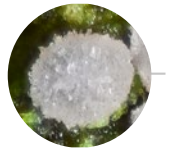
4. Apical apparatus red or blue in lugol 5
Ascis tips - 6



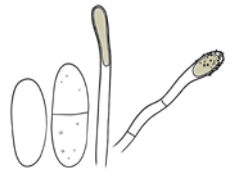
5. Spores 4,5-8,5 x 2-3 µm; asci with croziers; on *Pinus* and *Picea*. Fruitbody 0,2-0,5 mm wide, with a small stem; hymenium flat to arched, whitish, asci IKIbb or IKIrr (blue or red and after pretreatment) 30-50 x 4-6,5 µm, 8-spored; spores spindle-shaped, 4,5-8,5 x 2-3 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical, with VBs; marginal hairs 14-20 µm long, warty; rare or overlooked ***Ciliolarina neglecta***



Spores 6-12,5 x 3-4 µm; asci without croziers; on *Larix*, often on cankers. Fruitbody 0,1-0,3 mm wide, with a small stem; hymenium depressed to flat, whitish; asci IKIrr (red before and after pretreatment), 50-65 x 8-11 µm, 8-spored; spores ellipsoid to spindle-shaped, 6-12,5 x 3-4 µm, Qav. ≈ 2,5, smooth, 1-2-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical, with VBs; marginal hairs 10-18 µm long, warty; rare or overlooked ***Ciliolarina laricina***



6. Spores 3,5-5,5 µm wide; asci without croziers. Fruitbody 0,2-1 mm wide, sessile; hymenium ± flat; asci I-, 60-85 x 9-12 µm, 8-spored; spores ellipsoid to spindle-shaped, 8,5-11 x 3,5-5,5 µm, Qav. ≈ 2, smooth, 1-2-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical to club-shaped, with VBs; marginal hairs up to 30 µm long, warty; known from wood of coniferous trees; rare or overlooked ***Ciliolarina pinicola***
Spores 1,8-3,5 µm wide; asci with croziers 7

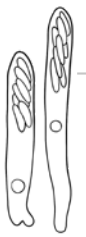


7. Fruitbodies reddening when bruised or with age (□→■). Fruitbody 0,1-0,5 mm wide, sessile or with a short stem; hymenium flat to arched, first whitish; asci I-, 40-60 x 6-9 µm, 8-spored; spores spindle-shaped, 5-8 x 2-3,5 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips cylindrical to club-shaped, with VBs; marginal hairs 10-25 µm long, smooth to warty; known from wood of conifers; rare or overlooked ***Ciliolarina laetifica***



Fruitbodies not reddening. Fruitbody 0,2-0,5 mm wide, with a short stem; hymenium depressed to flat, whitish, sometimes reddening; asci I-, 40-60 x 6-9 µm, 8-spored; spores spindle-shaped, 5-10 x 2,5-3,5 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips club-shaped, head-shaped to lance-shaped, with VBs; marginal hairs 14-25 µm long, warty; known from wood of conifers, often on cankers; rare or overlooked ***Ciliolarina ligniseda* s.l.**





8. Some asci with a globose drop below the spores; hairs ± cylindrical or somewhat tapering [*Psilachnum*] 9

Asci without a globose drop; hairs branched, flagellate, bend or hooked 24

9. On mosses, lycophytes, horsetails (*Equisetum*) or ferns 10

On trees or mono- and dicot herbs 15

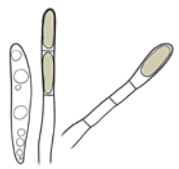
10. On mosses. Fruitbody 0,1-0,5 mm wide, with a short stem; hymenium depressed to flat, whitish to pale vinaceous; asci IKI+ (blue), 35-40 x 6-8 µm, 8-spored, without croziers; spores spindle-shaped, 6-8 x 2-2,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 25%; paraphysis tips cylindrical, with VBs; marginal hairs up to 35 µm long, smooth; known from dead leaves and stems of *Polytrichum*; rare or overlooked ***Psilachnum polytrichi* nom. prov.**



On lycophytes, horsetails (*Equisetum*) or ferns 11



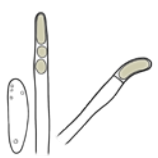
11. On lycophytes. Fruitbody 0,1-0,2 mm wide, with a short stem; hymenium flat to arched, whitish; asci IKI+ (blue), 30-40 x 5,5-6 µm, 8-spored, but soon aborting four of these, with croziers; spores spindle- to cucumber-shaped, 10-14 x 1,5-2 µm, Qav. ≈ 7, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips cylindrical, with VBs; marginal hairs 15-30 µm long, smooth; known from of *Lycopodium*; rare or overlooked ***Psilachnum tetrasporum* nom. prov.**



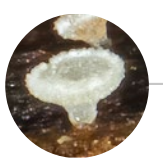
Horsetails (*Equisetum*) or ferns 12



12. On *Equisetum*. Fruitbody 0,5-0,7 mm wide, with a short stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 35-55 x 5-6 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 6-9 x 1,5-2,5 µm, Qav. ≈ 4, smooth, 1-celled; paraphysis tips lance-shaped to cylindrical, with VBs, protruding somewhat above the asci; marginal hairs 30-70 µm long, smooth; known from dead stems of *Equisetum sylvaticum*; rare or overlooked ***Psilachnum inquilinum***



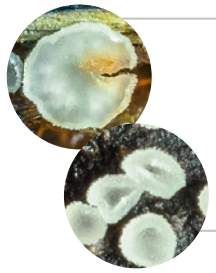
On ferns 13



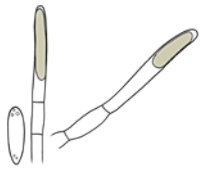
13. Spores 8-12 µm long. Fruitbody 0,2-0,5 mm wide, sessile or with a short stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 42 x 6 µm, 8-spored, with croziers; spores spindle-shaped, 8-12 x 2-2,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips club- to lance-shaped, with VBs; marginal hairs up to 35 µm long, smooth; known from dead stems of *Pteridium aquilinum*; rare or overlooked ***Psilachnum pteridigenum***



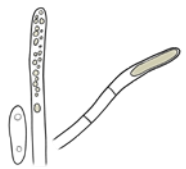
Spores on average shorter 14



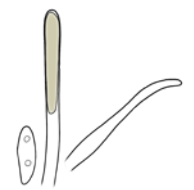
14. On stems of various ferns; fruitbodies yellowing or reddening when bruised. Fruitbody 0,2-0,8 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue), 30-40 x 4,5-6,5 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 5-9 x 1,2-2,2 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 0-10-3-10%; paraphysis tips cylindrical, with VBs; marginal hairs 10-25 µm long, smooth; known from dead leaves and stems of *Athyrium filix-femina*, *Pteridium aquilinum* and *Blechnum spicant*; rare or overlooked ***Psilachnum chrysostigmum***



At the blackened base of *Pteridium aquilinum*; fruitbodies not changing colour. Fruitbody 0,1-0,6 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue), 30-40 x 5-6 µm, 8-spored, without croziers; spores drop- to spindle-shaped, 4-8 x 1-1,7 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical, with VBs; marginal hairs XX µm long, smooth; rare or overlooked ***Psilachnum basi-pteridis* nom. prov.**



15. On wood of coniferous trees. Fruitbody 0,3-0,8 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue) 30-45 x 5-8 µm, 8-spored, with croziers; spores spindle-shaped, 5-7 x 2-2,5 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical, with VBs; marginal hairs tapering to bend, 20-30 µm long, hyaline, smooth; known from wood of conifers; rare or overlooked ***Psilachnum coniferarum* nom. prov.**



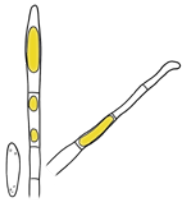
On other substrates 16



16. On dicot herbs 17

On moncots 19

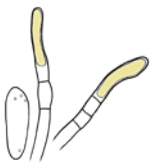
17. Fruitbodies whitish to pale yellowish (□□□→■), but immediately deep orange in ammonia fumes. Fruitbody 0,2-0,5 mm wide, sessile; hymenium depressed to flat; asci IKI+ (blue), 35-40 x 5-6 µm, 8-spored, with croziers; spores spindle-shaped, 6-7 x 1,5-2 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips club- to lance-shaped, protruding above the asci; marginal hairs 30-80 µm long, smooth; known from dead leaves and stems of *Filipendula ulmaria* and *Valeriana pyrenaica*; rare or overlooked ***Psilachnum rubrotinctum***



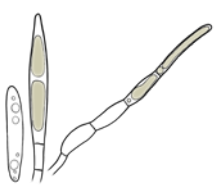
Fruitbodies unchangable in ammonia fumes 18



18. Paraphyses ± cylindrical; known from leaves of *Helleborus*. Fruitbody 0,1-0,8 mm wide, sessile; hymenium depressed to flat, pale orange; asci IKI+ (blue), 45-50 x 6,5-7 µm, 8-spored, with croziers; spores loaf- to spindle-shaped, 6,5-8,5 x 2,5-3 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical, with VBs; marginal hairs 40-50 µm long, smooth; rare or overlooked ***Psilachnum rubicundum***

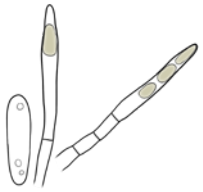


Paraphyses lance-shaped; known from leaves of *Valeriana pyrenaica*. Fruitbody 0,3-0,8 mm wide, sessile; hymenium depressed to flat, whitish, pale greyish to cream; asci IKI+ (blue), 25-45 x 3-6,5 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 6-12 x 1,3-3 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 25%; paraphysis tips lance-shaped, with VBs, protruding 1-7 µm above the asci; marginal hairs 20-40 µm long, smooth; rare or overlooked ***Psilachnum lanceolatoparaphysatum***





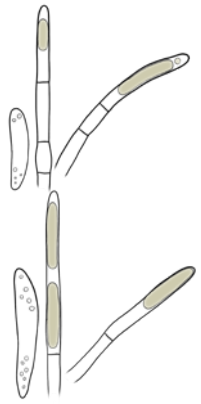
19. Asci without corziers. Fruitbody 0,1-0,6 mm wide, with a short stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 30-55 x 4-7 µm, 8-spored, without croziers; spores cylindrical, drop-shaped to spindle-shaped, 7-11 x 1,5-2,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, with VBs, protruding 5-20 µm above the asci; marginal hairs 40-60 µm long, smooth; known from dead leaves to dead stems of *Carex paniculata*; rare or overlooked ..... ***Psilachnum lateritioalbum***
Asci with croziers 20



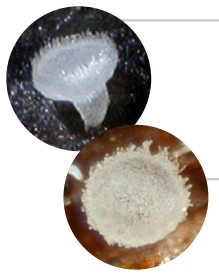
20. Paraphyses ± cylindrical, not protruding above the asci 21
Paraphyses lance-shaped, protruding above the asci 22



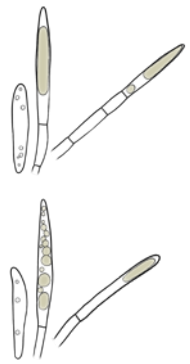
21. Spores 6-10,5 µm long; on dead stems and leaves of *Juncus*, *Scirpus* and various grasses. Fruitbody 0,15-0,3 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue), 30-45 x 5-6 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 6-10,5 x 1,5-2,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 3%; paraphysis with VBs; marginal hairs 30-50 µm long, smooth; rare or overlooked ***Psilachnum eburneum***
Spores longer than 10 µm; on dead stems and leaves of *Carex* and *Eriophorum*. Fruitbody 0,3-1,5 mm wide, with a short stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 60-70 x 4,5-8,5 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 11-15 x 2-3 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical, with VBs; marginal hairs 25-30 µm long, smooth; rare or overlooked ..... ***Psilachnum phymatodes***



22. Outer surface striate. Fruitbody 0,1-0,4 mm wide, sessile; hymenium depressed to flat, pale brown to greyish; asci IKI+ (blue), 40 x 5 µm, 8-spored, with croziers; spores spindle-shaped, 10-12 x 2-2 µm, Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips lance-shaped, with VBs, protruding up to 10 µm above the asci; marginal hairs up to 60 µm long, hyaline to brown, smooth; known from dead stems of grasses; rare or overlooked ..... ***Psilachnum striatum***
Outer surface probably not striate 23



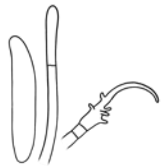
23. On dead stems and leaves of *Schoenoplectus*. Fruitbody 0,2-0,6 mm wide, with a short stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 40-50 x 5-6 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 8,5-10 x 2-2,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis with VBs, protruding up to 20 µm above the asci; marginal hairs 40-90 µm long, smooth; rare ..... ***Psilachnum schoenoplecti***
On dead stems and leaves of *Carex* species and various grasses. Fruitbody 0,1-0,3 mm wide, with a short stem; hymenium depressed to flat, whitish to very pale pinkish; asci IKI+ (blue), 30-50 x 4,5-7 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 7-11 x 1,5-2,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis with VBs, protruding 5-15 µm above the asci; marginal hairs 40-70 µm long, smooth; rare or overlooked ..... ***Psilachnum acutum***



24. Hairs branched near the tips (can be hard to see clearly – may seem like a dense, refractive margin) ..... [*Mollisina*] 25
Hairs different 32

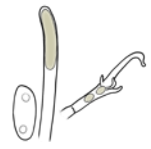
25. On dead leaves of broadleaved trees 26
On ferns or mono- or dicot herbs 28

26. Spores longer than 12 µm. Fruitbody 0,1-0,4 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue), 35-55 x 6-7,5 µm, 8-spored, without croziers; spores cylindrical to spindle-shaped, 12-16,5 x 1,5-2 µm, Qav. ≈ 8, smooth, 1-celled, oil contents ≈ ?%; paraphysis tips cylindrical, with VBs; marginal hairs 5-20 µm long, possibly glassy, smooth; known from dead leaves of *Quercus incana*; rare or overlooked ..... ***Mollisina uncinata***
Spores shorter 27



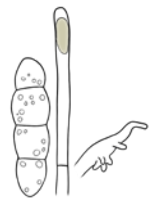


27. Hymenium yellowish (); VBs in paraphyses yellow. Fruitbody 0,3-0,5 mm wide, sessile; hymenium flat to arched; asci IKIrr (red before and after pretreatment), 25-35 x 3,5-5 µm, 8-spored, without croziers; spores ellipsoid to spindle-shaped, 4-7 x 1,4-2,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical, with VBs; marginal hairs 10-20 µm long, smooth; known from dead leaves of *Populus tremula* and *Populus nigra*; rare or overlooked ***Mollisina flava***
Hymenium whitish to pale brown (); VBs in paraphyses not yellow. Fruitbody 0,1-0,4 mm wide, sessile; hymenium flat to arched; asci IKIrb (red, blue after pretreatment) or IKIbb (blue), 30-50 x 6-7,5 µm, 8-spored, without croziers; spores spindle-shaped, 4,5-7,5 x 2-3,6 µm, Qav. ≈ 2, smooth, 1-celled, oil contents ≈ 0-3%, with or without a 1-ended slime coating; paraphysis tips club-shaped, with VBs; marginal hairs 15-25 µm long, smooth; known from cones to dead leaves of *Acer, Alnus, Corylus, Fagus, Populus canadensis* and *Quercus*; rare or overlooked ..... ***Mollisina acerina***



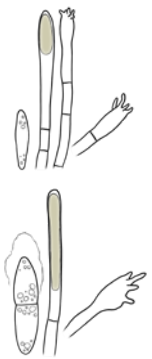


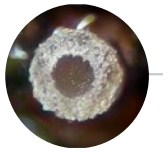
28. On ferns; spores 4-celled. Fruitbody 0,1-0,4 mm wide, with a stem; hymenium flat to arched, whitish to pale yellowish; asci IKIrb (red, blue after pretreatment), 70-90 x 11-15 µm, 8-spored, without croziers; spores spindle-shaped, 13-16 x 4-5 µm, Qav. ≈ 3, smooth, oil contents ≈ 3-10%, with or without a 1-sided slime coating; paraphysis tips cylindrical, with VBs; marginal hairs 10-15 µm long, smooth; known from dead leaves and stems of *Athyrium distentifolium* and *A. felix-femina*; rare or overlooked ..... ***Mollisina triseptata*** **nom. prov.**
On mono- og dicots; spores 1-2-celled 29



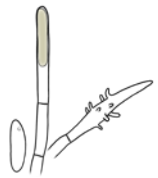
29. On monocots 30
On dicots 31

30. Spores 5,5-8 µm long. Fruitbody 0,1-0,2 mm wide, sessile; hymenium flat to arched, hyaline to whitish; asci IKI+ (blue), 30-40 x 5-6,5 µm, 8-spored, without croziers; spores spindle-shaped, 5,5-8 x 1,2-2 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical to branched, with VBs; marginal hairs 8-15 µm long, smooth; known from dead leaves and stems of *Phalaris, Carex* and *Juncus*; rare or overlooked ..... ***Mollisina echinulifera***
Spores 9-11 mm long. Fruitbody 0,3-0,7 mm wide, with a short stem; hymenium flat to arched, whitish; asci IKI+ (either blue or red,) 35-70 x 6-7 µm, 8-spored, without croziers; spores spindle-shaped, 9-11 x 2,5-3 µm, Qav. ≈ 3,5, smooth, 2-celled, oil contents ≈10-25%, with or without a 1-ended slime coating; paraphysis tips cylindrical, with VBs; marginal hairs 10-15 µm long, smooth; known from dead stems and leaves of *Carex* and *Scirpus*; rare or overlooked ..... ***Mollisina panici***

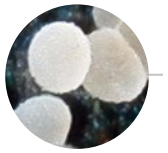




31. Spores 5-6,5 µm long, Qav. belov 3. Fruitbody 0,2-0,4 mm wide, sessile; hymenium flat to arched, whitish to pale brown; asci IKIrb (red, blue after pretreatment), 30-60 x 6-7,5 µm, 8-spored, without croziers; spores spindle-shaped, 5-6,5 x 2-3 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical, with VBs; marginal hairs 15-25 µm long, smooth; known from dead stems and leaves of *Chamerion angustifolium, Rubus fruticosus* and *Filipendula ulmaria*; rare or overlooked ..... ***Mollisina rubi***

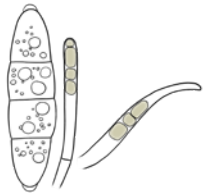


Spores 7-9 µm long, Qav. above 3. Fruitbody 0,1-0,3 mm wide, sessile; hymenium flat to arched, whitish; asci IKI+ (brobably blue), 50 x 6 µm, 8-spored; spores spindle-shaped, 7-9 x 2 µm, Qav. ≈ 4, smooth, 1-celled, oil contents unknown; paraphysis tips cylindrical to club-shaped, brobably with VBs; marginal hairs up to 20 µm long, smooth; known from dead stems of herbs; rare or overlooked ..... ***Mollisina alba***[2]



32. On leaves of broadleaved shrubs and trees (including *Rubus* and *Vaccinium*) 33
On other substrates including stems of *Rubus* 45

33. Spores 4-celled; on leaves of *Quercus ilex*. Fruitbody 0,3-1 mm wide, sessile; hymenium flat to arched, whitish to pale greyish rose; asci IKIrb (mostly red, blue after pretreatment), 70-95 x 9-11 µm, 8-spored, with croziers; spores spindle-shaped, 15-24 x 3,5-4,5 µm, Qav. ≈ 5, smooth, 4-celled, oil contents ≈ 25-50%; paraphysis tips flagellate, with VBs; marginal hairs 18-30 µm long, smooth; rare or overlooked ..... ***Calycellina albida***

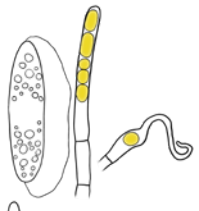


Spores 1-2-celled; mostly on other substrates 34



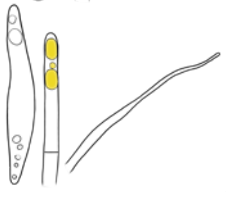
34. Mature asci 4-spored 35
Mature asci 8-spored 39

35. Spore Qav. below 4,5; known from leaves of *Rhododendron*. Fruitbody 0,2-0,5 mm wide, sessile; hymenium flat to arched, yellow; asci IKI+ (blue), 45-69 x 9,5-11,5 µm, 4-spored, with croziers; spores spindle-shaped, 13,5-17 x 4-5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 80%; paraphysis tips cylindrical, with VBs; marginal hairs flagellate, 15-30 µm long, hyaline, smooth; known from dead leaves of *Rhododendron ferruginosum*, and *R. hirsutum*; rare or overlooked ..... ***Calycellina lutea***



Spore Qav. above 4,5; on other hosts 36

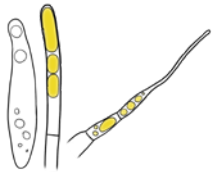
36. On leaves of *Vaccinium*; asci without croziers. Fruitbody 0,2-0,5 mm wide, sessile; hymenium flat to arched, yellow; asci IKI+ (blue), 30-50 x 6-6,5 µm, 4-spored, without croziers; spores cucumber-shaped, 14-20 x 2-2,5 µm, Qav. ≈ 7,5, smooth, 1-celled, oil contents ≈ 80%; paraphysis tips cylindrical, with VBs; marginal hairs flagellate, 40-80 µm long, smooth; rare or overlooked ..... ***Calycellina vaccinii* nom. prov.**



On other hosts; with croziers 37



37. Fruitbodies yellowish (). Fruitbody 0,2-0,5 mm wide, sessile; hymenium flat to arched, yellowish; asci IKI+ (blue), 30-35 x 6-8 µm; spores spindle- to bend-spindle-shaped, 13,5-19 x 2-3,5 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical, with yellow VBs; marginal hairs flagellate, up to 200 µm long, smooth; known from dead leaves of *Alnus* and *Betula*; rare or overlooked ..... ***Calycellina araneocincta***

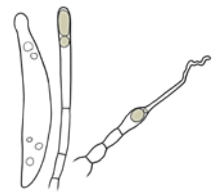


Fruitbodies whitish to greyish cream () 38

2. This is a badly known taxon, not least its ecology, which is given as "In caulibus herbaceis".



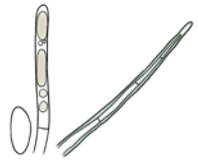
38. Marginal hairs warty or encrusted ..... see *Calycellina asperipila*, cpl. xx
Marginal hairs smooth. Fruitbody 0,1-0,5 mm wide, sessile; hymenium flat to arched, whitish; asci IKI+ (blue), 30-50 x 5,5-7 µm, 4-spored, with croziers; spores spindle- to bend-spindle-shaped, 15-20 x 2,5-3,5 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 3%, sometimes with a 1-ended slime coating; paraphysis tips cylindrical, with VBs; marginal hairs flagellate, 30-100 µm long; known from dead leaves of *Acer, Alnus, Betula, Fagus, Populus, Quercus, Salix* and *Tilia;* rare or overlooked ..... ***Calycellina lachnobrachya***





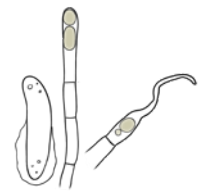
39. Spore Qav. below 5,5 40
Spore Qav. above 5,5 43

40. Spores 3,5-5,5 µm long. Fruitbody 0,1-0,3 mm wide, sessile; hymenium depressed to flat, whitish to hyaline; asci weakly IKIrb (red, blue after pretreatment), 23-40 x 5-5,5 µm, 8-spored, without croziers; spores spinlde-shaped, 3,5-5,5 x 1,5 -2 µm, Qav. ≈ 2,6, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical, with VBs; marginal hairs 180-255 µm long, hyaline, ± glassy, smooth; known from dead leaves of deciduous trees; rare or overlooked ..... ***Hyalopeziza ciliata***



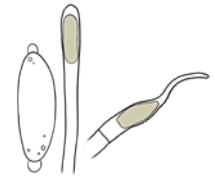
Spores longer 41

41. Spores bend-spindle-shaped. Fruitbody 0,1-0,2 mm wide, sessile; hymenium flat to arched, hyaline to whitish; asci IKI+ (blue), 25-45 x 5-8,5 µm, 8-spored, with croziers; spores 9-12 x 2,5-3 µm, Qav. ≈ 3,8, smooth, 1-celled, oil contents ≈ 3%, with or without a 1-ended slime coating; paraphysis tips cylindrical, with VBs; marginal hairs flagellate, 10-25 µm long, smooth; known from dead leaves of deciduous trees; rare or overlooked ..... ***Calycellina foliicola***



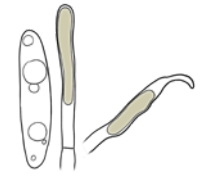
Spores symmetrically to obliquely spindle-shaped but not obviously bend 42

42. Spores 9-14 µm long, Qav. below 4, oil contents 0-3%. Fruitbody 0,2-0,4 mm wide, sessile; hymenium flat to arched, whitish to buffish; asci IKI+ (blue), 50-88 x 7,5-9,5 µm, with croziers; spores spindle-shaped, 9-14 x 3-4 µm, Qav. ≈ 3,3, smooth, 1-celled, with or without a 2-ended slime coating; paraphysis tips cylindrical, with VBs; marginal hairs flagellate to hooked, 15-35 µm long, smooth; known from dead leaves of *Acer, Betula, Castanea, Fagus, Quercus* and *Rubus fruticosus*; rare or overlooked ..... ***Calycellina pseudopuberula***



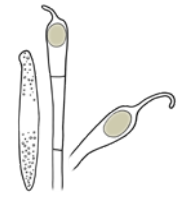


Spores 12-16,5 µm long, Qav. above 4, oil contents ≈ 10-25%. Fruitbody 1-1,5 mm wide, sessile; hymenium flat to arched, cream; asci IKI+ (blue), 70-105 x 7,5-10,5 µm, with croziers; spores spindle-shaped, 12-16,5 x 2,5-4 µm, Qav. ≈ 4,4, smooth, 1-celled; paraphysis tips cylindrical, with VBs; marginal hairs band to hooked, up to 30 µm long, smooth; known from dead leaves of *Rubus idaeus* and *Rubus fruticosus*; rare or overlooked ..... ***Calycellina separabilis***





43. Fruitbodies erumpent from the leaf surface and flipping a small, dark lid of leaf surface; paraphyses often with fingered or hooked outgrowths. Fruitbody 0,1-0,4 mm wide, sessile; hymenium flat to arched, pale brownish grey; asci IKI+ (blue), 40-50 x 8 µm, with croziers; spores spindle-shaped, 12-19 x 1,5-2,5 µm, Qav. ≈ 8, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips club- to head-shaped, with VBs; marginal hairs 10-20 µm; hairs ± hooked, 10-20 µm long, smooth; known from dead leaves of *Acer, Fagus* and *Quercus*; rare or overlooked ..... ***Calycellina fagina***

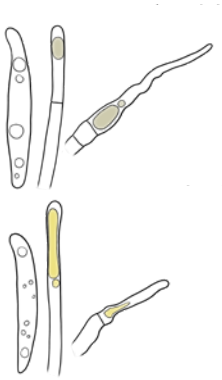


Fruitbodies not erumpent with a lid; paraphyses cylindrical without outgrowths 44



44. Marginal hairs warty or encrusted. Fruitbody 0,2-0,8 mm wide, sessile; hymenium flat to arched, whitish to yellowish; asci IKI+ (blue), 40-70 x 6,5-9 µm, 4 to 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 14-20 x 2-3 µm, Qav. ≈ 7, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips cylindrical, with VBs; marginal hairs flagellate, 30-200 µm long, hyaline, warty; known from dead leaves of *Alnus* and *Carpinus*; rare or overlooked ***Calycellina asperipila***

Marginal hairs smooth. Fruitbody 0,3-1 mm wide, sessile; hymenium flat to arched, whitish to pale yellowish; asci IKI+ (blue), 50-70 x 6-8 µm, 8-spored, with croziers; spores cucumber- to bend-spindle-shaped, 12-18 x 1,5-2,5 µm, Qav. ≈ 7,5, smooth, 1-2-celled, oil contents ≈ 25%; paraphysis tips cylindrical, with VBs; marginal hairs ± cylindrical, 20-35 µm long, smooth; known from dead leaves of *Betula, Fagus, Quercus petraea* and *Q. robur*; rare or overlooked ***Calycellina punctata***



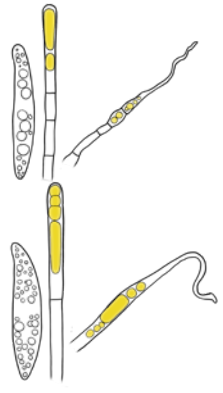
45. On horsetails (*Equisetum*), ferns or dicot herbs ... 46
On wood (including stems of *Rubus*), needles or cones (including *Alnus*) ... 48

46. On horsetails (*Equisetum*). Fruitbody 0,1-0,4 mm wide, ± sessile; hymenium depressed to flat, whitish to pinkish; asci IKI+ (blue), 25-35 x 6 -7,5 µm, 4 to 8-spored, with croziers; spores cylindrical to spindle-shaped, 7-10 x 2-2,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 25%; paraphysis tips cylindrical; marginal hairs bend to hooked, 15-35 µm long, smooth; known from dead stems of *Equisetum hyemale*; rare or overlooked ***Phialina anomala***
On ferns or dicot herbs ... 47

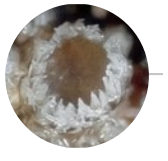


47. On dead stems of *Filipendula*. Fruitbody 0,2-0,8 mm wide, sessile; hymenium flat to arched, yellowish; asci IKI+ (blue), 30-40 x 5-6,5 µm, 4-spored, with croziers; spores spindle- to bend-spindle-shaped, 12-15 x 2-2,5 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 80%, with or without a surrounding slime coating; paraphysis tips cylindrical, with VBs; marginal hairs up to 35 µm long, smooth; rare or overlooked ***Calycellina ulmariae***

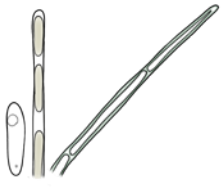
On ferns. Fruitbody 0,2-0,5 mm wide, sessile; hymenium flat to arched, yellowish; asci IKI+ (blue), 30-40 x 6-7 µm, 4-spored, with croziers; spores spindle-shaped, 11,5-16 x 2,5-3 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 80%, with or without a surrounding slime coating; paraphysis tips cylindrical, with yellow VBs; marginal hairs up to 50 µm long, smooth; known from dead stems and leaves of *Pteridium aquilinum* and *Dryopteris dilatata*; rare or overlooked ***Calycellina flaveola***[3]



48. On wood or cones of deciduous bushes and trees including *Rubus* ... 49
On wood, cones or needles of coniferuos trees ... 55

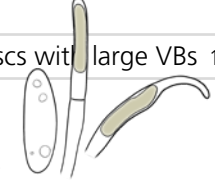


49. Hymenium brown (); marginal straight and glassy. Fruitbody 0,2-0,2 mm wide, sessile; hymenium depressed to flat; asci IKI+ (blue), 28-35 x 3,5-4 µm, 8-spored, without croziers; spores drop-shaped, 6-9,5 x 1,5-2 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs smooth; known from wood of *Myrica gale* and possibly also on *Ericaceae*; rare or overlooked ***Hyalopeziza corticicola***
Hymenium whitish or yellowish (); hairs bend, hooked or wavy, not glassy ... 50

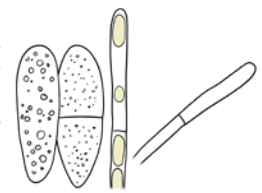


50. On cones of *Alnus*. Fruitbody 0,7-1,5 mm wide, sessile to short stemmed; hymenium flat to arched, whitish; asci IKI+ (blue), 60-85 x 7-8,5 µm, 8-spored, with croziers; spores spindle-shaped, 9-13 x 2,5-4 µm, Qav. ≈ 3,5, smooth, 1-2-(4)-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical, with VBs; marginal hairs bend to hooked, 10-30 µm long, smooths; rather common ***Calycellina alniella***
On wood, including stems of *Rubus* ... 51

3. The badly known *Calycellina triseptata* should have 4-celled spores and cylindrical marginal hairs. It is describet from *Athyrium alpestre*.



51. On wood of *Rhododendron ferrugineum*. Fruitbody 1-3 mm wide, sometimes with a short stem; hymenium depressed to flat, yellowish; asci IKI+ (blue), 100-135 x 8-12 µm, 8-spored, with croziers; spores spindle-shaped, 12-18,5 x 4-6 µm, Qav. ≈ 3, smooth, 1-2-celled, oil contents ≈ 50-80%; paraphysis tips cylindrical, with VBs; marginal hairs up to 40 µm long, straight, brownish, with goo; rare or overlooked ***Chlorosplenium cenangium***
On other hosts ... 52

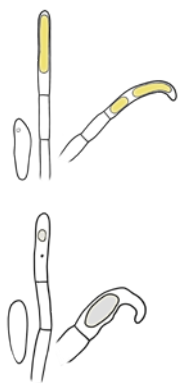


52. Spores 4,5-8 µm long, 1-celled ... 53
Spores 15-23 µm long, multi-celled ... 54



53. Hymenium yellowish (); apical apparatus I-. Fruitbody 0,1-0,3 mm wide, with a short stem; hymenium flat to arched; asci 35-55 x 5,5-8 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 5,5-7 x 2-3 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical, with yellowish VBs; marginal hairs bend to hooked, up to 30 µm long, smooth; known from wood of deciduous; rare or overlooked ***Hamatocanthoscypha straminella***

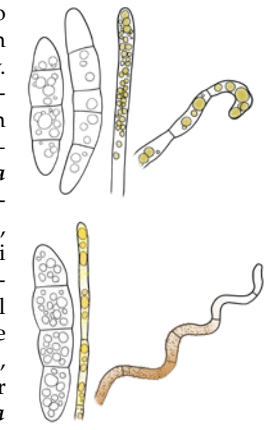
Hymenium white (); apical apparatus I+ (IKIbb). Fruitbody 0,2-0,8 mm wide, sessile; hymenium flat to arched; asci 25-40 x 3,5-6 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 4,5-8 x 1,5-3 µm, Qav. ≈ 2,8, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical, with VBs; marginal hairs bend to hooked, 30-40 µm long, hyaline, smooth; known from cones of *Picea* and *Pinus*; rare or overlooked ***Psilocistella conincola → Hamatocanthoscypha***





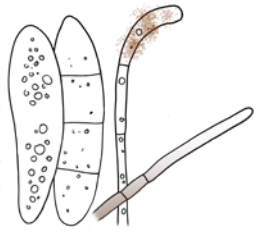
54. Fruitbodies with yellowish margin and outer surface; hairs hooked, 10-30 µm long. Fruitbody 0,2-0,8 mm wide, sessile; hymenium flat to arched, yellowish; asci IKI+ (blue), 80-105 x 8-12 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 15-23 x 4-5 µm, Qav. ≈ 4, smooth, 2-4-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical, with yellowish VBs; marginal hairs 10-30 µm long, smooth; known from wood of *Betula, Fraxinus, Populus, Quercus* and *Vaccinium uliginosum*; rare or overlooked ***Calycellina ochracea***

Fruitbodies with grownish margin and outer surface; hairs wawy, 50-70 mm long. Fruitbody 1-2 x 0,5-1 mm; hymenium depressed to flat, ± curry yellow; margin and flank with dark greyish brown hairs; asci IKI+ (blue), 130-150 x 15-16 µm, 8-spored, with croziers; spores bend-spindle-shaped, 18-31 x 5,5-7,5 µm, Qav. ≈ 4, smooth, 2-4-celled, oil contents ≈ 80%; paraphysis tips cylindrical, protruding 14-20 µm above the asci, with yellowish VBs; marginal hairs 50-70 µm long, pale brown, smooth to warted; known from dead stems of *Rubus fruticosus*; rare or overlooked ***Tapesina griseovitellina***





55. Hairs straight and dark brown; outer side of the fruitbodies dark brown to black ... 56
Hairs bend to hooked, whitish to yellowish; outer side of the fruitbodies whitish, yellowish to pale brown ... 57



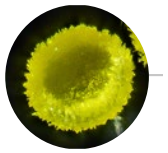
56. Spores with rounded ends, 15-25 µm long. Fruitbody 1-2,5 mm wide, sometimes with a short stem; hymenium depressed to flat, olivaceous buff; asci I-, 90-130 x 14-15 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 15-25 x 5-6 µm, Qav. ≈ 3,5, smooth, 1-4-celled, oil contents ≈ 10%; paraphysis tips cylindrical; marginal hairs up to 80 µm long, pale to dark brown, smooth; on *Pinus*, often on cankers; probably all year round; rare or overlooked ***Crumenulopsis sororia***

Spores with acute ends, 20-34 µm long. Fruitbody 0,7-1,5 mm wide, sometimes with a short stem; hymenium depressed to flat, clay-pink, clay-buff to greyish; asci I-, 90 x 17,5 µm, 8-spored, with croziers; spores spindle- to bend-spindle- to almost new-moon-shaped,

20-34 x 3-4 µm, Qav. ≈ 7,5, smooth, 1-celled, oil contents ≈ 50-80%; paraphysis tips cylindrical; marginal hairs up to 80 µm long, pale to dark brown, smooth; on *Pinus*; probably all year round; rare or overlooked ..... ***Crumenulopsis pinicola***



55. Spores 3-5,5 µm long, Qav. below 2,2. Fruitbody 0,1-0,3 mm wide, with a short stem; hymenium flat to arched, white; asci IKI+ (blue), 30-35 x 4 µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 3-5,5 x 2-3 µm, Qav. ≈ 1,7, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical; marginal hairs bend to hooked, 25-65 µm long, finely warty; known from dead needles of *Juniperus*; rare or overlooked ..... ***Hamatocanthoscypha rotundispora***



Spores on average longer, Qav. above 2,2 56

56. Fruitbodies bright yellow (); VBs yellow. Fruitbody 0,1-0,6 mm wide, sessile; hymenium flat to arched; asci IKI+ (blue), 40-60 x 5-6,5 µm, 4-6-8-spored, with croziers; spores drop- to spindle-shaped, 5-10,5 x 1,5-2,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs hooked, 30-40 µm long, smooth; known from wood and cones of *Juniperus* and *Pinus*; rare or overlooked ..... ***Hamatocanthoscypha uncipila***

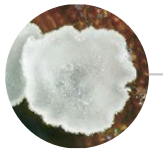
Fruitbodies whitish or pale brown (); VBs not bright yellow 57

57. Apical apparatus red in lugol; on *Juniperus*. Fruitbody about 0,1-0,5 mm wide, with a short stem; hymenium flat to arched, whitish; asci IKIrb (red, blue after pretreatment), 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 7,5-10 x 2-3 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical, with VBs; marginal hairs hooked, up to 30 µm long, hyaline to glassy, smooth; rare or overlooked ..... ***Hamatocanthoscypha juniperi* nom. prov.**



Apical apparatus blue in lugol; on various conifers including *Juniperus* 58

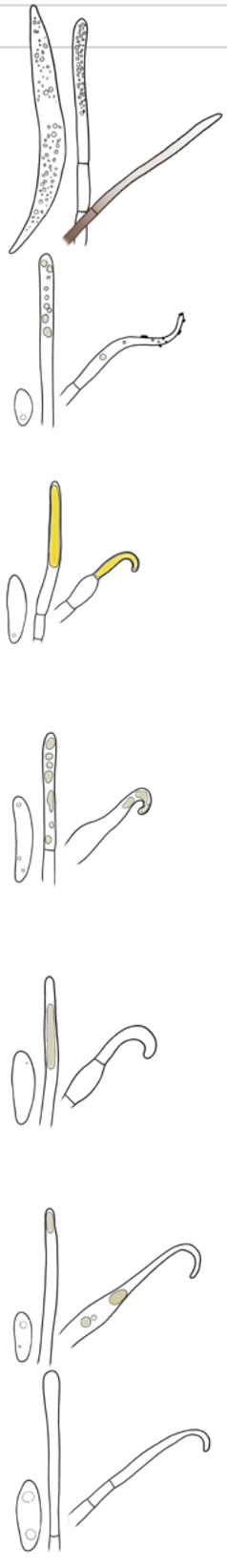
58. Spores with very few oil drops (0-3%); hymenium pale brown (); on needles. Fruitbody 0,1-0,4 mm wide, sessile; hymenium flat to arched, pale brownish; asci IKI+ (blue), 30-45 x 4-5 µm, 8-spored, with croziers; spores spindle- to loaf-shaped, 5-10,5 x 1,3-3 µm, Qav. ≈ 3,5, smooth, 1-celled; paraphysis tips cylindrical, with VBs; marginal hairs hooked 20-40 µm long, smooth; known from dead needles of *Juniperus* and *Pinus*; rare or overlooked ..... ***Hamatocanthoscypha uncinata***



Spores with about 10% oil drops; hymenium whitish (); on wood and cones 59

59. Spore width on average below 2 µm. Fruitbody 0,1-0,4 mm wide, with a short stem; hymenium flat to arched, whitish; asci IKI+ (blue), 25-30 x 4-5,5 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 4-7 x 1-2 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical, with VBs; marginal hairs hooked 15-35 µm long, hyaline to glassy, smooth to warty; known from wood and cones of coniferous trees; rare or overlooked ..... ***Hamatocanthoscypha laricionis***

Spore width on average above 2 µm. Fruitbody 0,1-0,5 mm wide, with a short stem; hymenium flat to arched, whitish; asci IKI+ (blue), 30-45 x 3,5-4,5 µm, 8-spored, with croziers; spores spindle-shaped, 5,5-12 x 2-3 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical, with VBs; marginal hairs hooked 20-40 µm long, smooth; known from wood of *Pinus*; rare or overlooked ..... ***Hamatocanthoscypha ocellata***



Key C – hairs glassy (refractive)

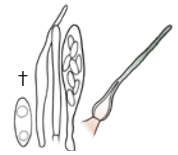
Genus synopsis

Olla, Unguicularia: hairs I+ (dextrinoid), retains their refactivenes in 7-10%
Hyalopeziza, Unguiculariopsis, Unguiculella: hairs I-, retains their refactivenes in 7-10% KOH
Urceolella: hairs I-, looses their refactivenes in 7-10% KOH

1. Growing on fungi or lichens 2
Growing on plants 22

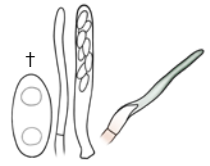
2. On lichenized fungi 3
On non-lichenized fungi 8

3. Spores 4-5,5 µm long; on *Lobaria*. Fruitbody 0,3-0,7 mm wide; hymenium depressed, dark brown; asci I-, 25-45 x 4-5 µm, 8-spored, with croziers; spores ellipsoid, 4-5,5 x 2-2,5 µm, Qav. ≈ 2, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 15-70 µm long, hyaline with a brownish base, smooth; rare or overlooked ..... ***Unguiculariopsis manriquei***



Spores more than 5 µm long; on other hosts 4

4. On *Bilimbia* and *Mycobilimbia*. Fruitbody 0,1-0,4 mm wide; hymenium depressed, ± dark brown; asci I-, 45-55 x 7 µm, 8-spored, with croziers; spores ellipsoid, 7-9 x 2,5-3,5 µm, Qav. ≈ 2,5, smooth, 1-celled; paraphysis tips cylindrica; marginal hairs 20-60 µm long, hyaline with a brownish base, smooth; rare or overlooked ..... ***Unguiculariopsis refractiva***



On other hosts 5

5. On *Lecanora* 6
On other hosts 7



6. Hairs with ± straight tips; on *Lecanora saligna*. Fruitbody 0,1-0,3 mm wide; hymenium depressed, dark brown; asci I-, 25-35 x 4,5-6 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 5-7 x 2-2,5 µm, Qav. ≈ 2,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 17-30 µm long, hyaline with a brownish base, smooth; rare or overlooked ..... ***Unguiculariopsis lesdainii***

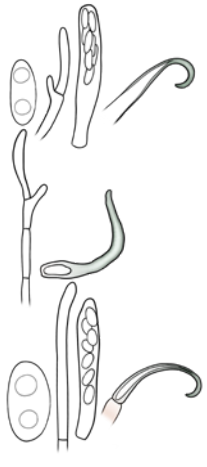


Hairs with bend tips; on *Lecanora carpinea*, *L. chlarotera* and others, but not *L. saligna*. Fruitbody 0,1-0,3 mm wide; hymenium depressed, dark brown; asci I-, 30-45 x 6-7 µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 6-7,5 x 2-3 µm, Qav. ≈ 2,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 18-35 µm long, hyaline with a brownish base, smooth; rare or overlooked ..... ***Unguiculariopsis thallophila***

7. On *Acrocordia gemmata*. Fruitbody 0,1-0,2 mm wide; hymenium depressed, ± dark brown; asci I-, 20-45 x 4-8 µm, 8-spored, with croziers; spores ellipsoid, 5,5-7,5 x 2,5-3 µm, Qav. ≈ 2,5, smooth, 1-celled; paraphysis tips club-shaped; marginal hairs 25-50 µm long, hyaline with a brownish base, smooth; rare or overlooked ..... ***Unguiculariopsis acrocordiae***

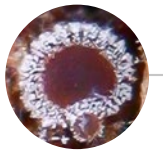


On *Evernia prunastri*. Fruitbody 0,3-1 mm wide; hymenium depressed, dark brown; asci I-, µm, 8-spored, with croziers; spores ellipsoid, 6-9,5 x 2,5-4 µm, Qav. ≈ 2,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 15-30 µm long, hyaline with a brownish base, smooth; rare or overlooked ..... ***Unguiculariopsis lettaui***



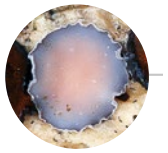
8. Spores globose to subglobose (Qav. 1-1,2) 9
Spores more oblong (Qav. above 1,2) 14

9. On apothecia of *Godronia*. Fruitbody 0,3-0,6 mm wide, with a stem; hymenium depressed, ± dark brown; asci I-, 34-36 x 5-6 µm, 8-spored, with croziers; spores 3,4-3,7 x 3,3-3,6 µm, Qav. ≈ 1, smooth; paraphysis tips cylindrical; marginal hairs 20-45 µm long, hyaline with a brownish base, smooth; known from *Godronia ribis*; rare or overlooked ***Unguiculariopsis godroniicola***



On perithecioid, bitunicate fungi 10

10. On *Cucurbitaria*. Fruitbody 0,2-2 mm wide; hymenium depressed, ± dark brown; asci I-, 35-50 x 6-8,5 µm, 8-spored, with croziers; spores 3-4 x 3-4 µm, Qav. ≈ 1, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 20-40 µm long, hyaline with a brownish base, smooth; known from *Cucurbitaria berberidis*; rare or overlooked ***Unguiculariopsis rehmii***



On other hosts 11

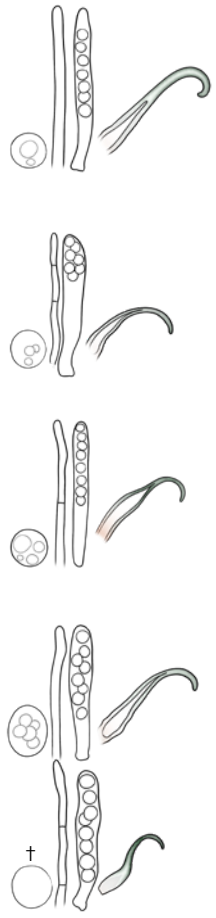
11. On *Rhytidhysteron*. Fruitbody 0,5-2 mm wide; hymenium depressed, dark pinkish grey; asci I-, 40-65 x 5-7 µm, 8-spored, with croziers; spores 3-4 x 3-4 µm, Qav. ≈ 1, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 15-25 (-45) µm long and massive, hyaline with a brownish base, smooth; rare or overlooked ***Unguiculariopsis ravenelii***



On other hosts 12

12. Spores subglobose, 4-6 µm long; on *Myriangium*. Fruitbody 0,1-0,7 mm wide; hymenium depressed, ± dark brown; asci I-, 50-80 x 6-8 µm, 8-spored, with croziers; spores 4-6 x 3,8-5,5 µm, Qav. ≈ 1, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 15-30 µm long, hyaline with a brownish base, smooth; rare or overlooked ***Unguiculariopsis ilicincola***

Spores globose, 3-4 µm diameter; on *Karstenula*. Fruitbody 0,3-0,6 mm wide; hymenium depressed, dark brown; asci I-, 30-35 x 4,5-5,5 µm, 8-spored, with croziers; spores 3,5-4 x 3,5-4 µm, Qav. ≈ 1, smooth; paraphysis tips cylindrical; marginal hairs 15-30 µm long, hyaline with a brownish base, smooth; rare or overlooked ***Unguiculariopsis livida***



. . . .

14. Spore Qav. above 4 15
Spore Qav. below 4 17

15. Marginal hairs up to 100 µm long; on *Typhula* sclerotia. Fruitbody 0,1-0,5 mm wide, with a stem; hymenium depressed to flat, reddish (brown?) to yellowish (brown?); asci I-, 30-45 x 4-5 µm, 8-spored; spores drop-shaped, 6-8 x 1-1,5 µm, Qav. ≈ 5,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 100 µm long but looses glassyness in 5-7% KOH, ± hyaline, smooth; rare or overlooked ***Urceolella seminis***



Hairs up to 40 µm long or shorter; on other hosts 16

16. On *Thyronectria coryli* on deciduous trees. Fruitbody 0,3-0,8 mm wide; hymenium depressed, whitish to ± brown; asci I-, 25-35 x 5-6 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 6,5-9,5 x 1,5-2 µm, Qav. ≈ 4,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 25-40 µm long, ± hyaline, smooth; rare or overlooked ***Unguiculella nectriiphila***

On *Leptopeltis filicina* or other leaf parasites on ferns and clubmosses. Fruitbody 0,1-0,2 mm wide, with a stem; hymenium depressed to flat, hyaline to whitish; asci IKIrr (red after pretreatment), 33-50 x 5-8 µm, 8-spored, with croziers; spores spindle-shaped, 7-14 x 1,5-3 µm, Qav. ≈ 4,5, smooth, 1-(2)-celled, with 1-ended slime coating; paraphysis tips cylindrical, with VBs; marginal hairs 25 µm long but looses glassyness in 5-7% KOH, ± hyaline, smooth; known from fungi on dead leaves of *Dryopteris* and *Lycopodium*; rare or overlooked ***Urceolella pani***





17. Hymenium whitish to pale pinkish (); on *Schizothecium* on dung. Fruitbody 0,2-1 mm wide; hymenium arched to depressed; asci I-, 30-70 x 8-10 µm, 8-spored, with croziers; spores ellipsoid, 4,5-8 x 3-4,5 µm, Qav. ≈ 1,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 25-35 µm long and hyaline, smooth; rare or overlooked ***Unguiculella tityrii***



Hymenium brown to dark brown (); on other hosts 18

18. On apothecia of *Pezizula*. Fruitbody 0,5-1,5 mm wide; hymenium depressed, ± dark brown; asci I-, 35-55 x 8-10 µm, 8-spored, with croziers; spores ellipsoid, 5,5-7,5 x 2,5-3,5 µm, Qav. ≈ 2, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 30-40 µm long, hyaline with a brownish base, smooth; rare or overlooked ***Unguiculariopsis marsonii* nom. prov.**

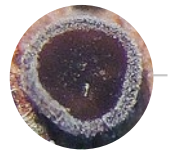


On perithecia or coelomycetous anamorphs 19

19. On *Eutypa*. Fruitbody 1-2 mm wide; hymenium depressed, pale brown to dark brown; asci I-, µm, 8-spored, with croziers; spores ellipsoid, 6-8 x 3-4 µm, Qav. ≈ 2, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 15-30 µm long, hyaline with a brownish base, smooth; woth an anamorph with triangular spores (right drawing); known from *Eutypa lata*; rare or overlooked ***Unguiculariopsis parasitica***



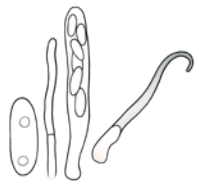
On other hosts 20



20. On *Amphisphaerella*. Fruitbody 0,3-1 mm wide; hymenium depressed, pale brown to dark brown; margin and flank with hairs; asci I-, 35-45 x 5-6 µm, 4-6-8-spored, with croziers; spores ellipsoid, 4,5-7 x 2,5-3,5 µm, Qav. ≈ 2, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical, protruding µm above the asci; marginal hairs up to 50 µm long, hyaline with a brownish base, smooth; known from *Amphisphaerella xylosti* on *Lonicera* and *Cornus*; rare or overlooked ***Unguiculariopsis robergei* subsp. *robergei***



On coelomycetous anamorphs. Fruitbody 0,2-0,8 mm wide; hymenium depressed, pale brown to dark brown; margin and flank with hairs; asci I-, 30-40 x 6-7 µm, mostly 4-6-8-spored, with croziers; spores ellipsoid, 6,5-10 x 2-3 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical, protruding µm above the asci; marginal hairs 22-45 µm long, hyaline with a brownish base, smooth; known from a coelomycetous anamorph on *Rosa*; rare or overlooked ***Unguiculariopsis robergei* subsp. *coelomyceticola***



. . .

22. Paraphyses with VBs see key B
Paraphyses without VBs 23

23. On ferns; with somewhat refractive but hollow hairs see *Microscypha arenula* Gxx
On other hosts; at least hair tips massive 24

24. Hairs retain their refactivenes in 7-10% KOH 25
Hairs looses their refactivenes or dissolves totally in 7-10% KOH 45

25. Hairs with hooked tips, I- 26
Hairs with ± straight tips, I+ (dextrinoid) or I- 32

26. Spores 3-5,5 µm long, Qav. 1,7 see *Hamatocanthoscypha rotundispora*, Cx
Spores longer, Qav. higher 27

27. Apical apparatus I+ 28
Apical apparatus I- 29



28. Hairs or paraphyses with VBs; on leaves of deciduous trees ..... see *Calycellina foliicola*, Cxxx

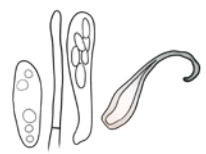
Hairs and paraphyses without VBs; on stems of dicot herbs. Fruitbody 0,2-0,6 mm wide; hymenium arched, hyaline, whitish to clay-pink; asci IKI+ (blue), 45-65 x 7-10 µm, 8-spored, with croziers; spores spindle-shaped, 6-13,5 x 2-3,5 µm, Qav. ≈ 3,5, smooth, 1-celled, sometimes surrounding by a slime coating; paraphysis tips club-shaped; marginal hairs 16-22 µm long, hyaline, smooth; known from dead stems of *Cirsium, Equisetum, Petasites* and *Urtica*; rare or overlooked ..... ***Unguiculella incarnatina***





29. Hymenium dark brown (). Fruitbody 0,3-1 mm wide; hymenium depressed; asci I-, 35-55 x 6,5-8 µm, 2-4-6-8-spored, with croziers; spores ellipsoid, 5,5-10,5 x 2,2-3,2 µm, Qav. ≈ 3, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 25-35 µm long, hyaline with a brownish base, smooth; known from wood of *Rosa* and *Sambucus*; rare or overlooked ..... ***Unguiculariopsis hamatopilosa***[4]

Hymenium hyaline, whitish to buffish () 30



30. On *Salix caprea* with *Thyronectria coryli* ..... see *Unguiculella nectriiphila* cpl. xx

On other hosts 31



31. On wood of deciduous trees; spore Qav. below 3,5. Fruitbody 0,2-1,5 mm wide; hymenium depressed to flat, whitish, yellowish to buffish; asci I-, 30-45 x 6-7 µm, 8-spored, with croziers; spores ellipsoid, loaf- to spindle-shaped, 5-8 x 2-3 µm, Qav. ≈ 2,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 30-45 µm long, hyaline, smooth; possibly growing in connection but not directly on pyrenomycetous hosts; rare or overlooked ..... ***Unguiculella eurotioides***

On dicot herbs; spore Qav. above 3,5. Fruitbody 0,3-1 mm wide; hymenium arched, hyaline to whitish; asci I-, 60-85 x 9-13 µm, 8-spored, with croziers; spores spindle-shaped, 6-14 x 1,5-3 µm, Qav. ≈ 4,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs up to 20 µm long, hyaline, smooth; rare or overlooked ..... ***Unguiculella hamulata***

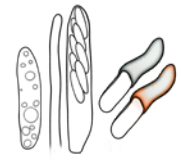


32. Hair tips (glassy part) I+ (dextrinoid); fruitbodies often rather jar-shaped (as high as wide); hairs massive and rather short (15-50 (-110) µm long) ..... [*Olla*] 33

Hair tips I-; fruitbodies more disc-shaped; hairs mostly thickwalled but hollow, rarely massive, mostly with rather long (20-250 µm) ..... [*Hyalopeziza* p.p., *Hyphopeziza* & *Laetinaevia* p.p.] 36

33. On herbs 34

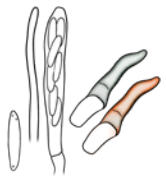
On wood of deciduous trees 35



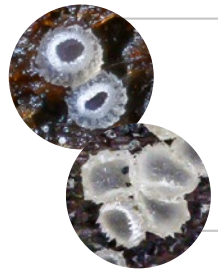
34. On *Juncus*; spores 8-13 µm long. Fruitbody 0,1-0,6 mm wide; hymenium deeply depressed, hyaline to whitish; asci IKI+ (blue), 30-40 x 6,5-8 µm, 8-spored, without croziers; spores spindle- to bend-spindle-shaped, 8-13 x 2-2,5 µm, Qav. ≈ 4,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 35-50 µm long, hyaline, smooth , I+ (dextrinoid); known from *Juncus effusus* and *J. inflexus*; rare or overlooked ..... ***Olla costata***



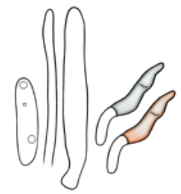
On dicot herbs; spores 5-8 µm long. Fruitbody 0,1-0,5 mm wide; hymenium deeply depressed, hyaline to whitish; asci IKI+ (blue), 25-35 x 4-5 µm, 8-spored, without croziers; spores drop- to spindle-shaped, 5-8 x 1,2-2 µm, Qav. ≈ 4, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 15-35 µm long, hyaline, smooth , I+ (dextrinoid); known from large stems of e.g. *Epilobium, Eupatorium, Reynoutria* and *Rubus*; rare or overlooked ..... ***Olla millepunctata***



4. There are similar, undescribed species on coniferous cones and wood.



35. Fruitbodies distinctly jar-shaped (urceolate) with an almost smooth margin and a narrow, pale greyish hymenium; hairs 25-40 µm long. Fruitbody 0,2-0,4 mm wide; hymenium depressed; asci IKI+ (blue), 30-50 x 5,5-7 µm, 8-spored, without croziers; spores drop- to spindle-shaped, 6-9,5 x 1,6-2,8 µm, Qav. ≈ 3,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs hyaline, smooth , I+ (dextrinoid); known from wood of *Alnus, Fagus* and *Prunus*; rare or overlooked ..... ***Olla scrupulosa***



Fruitbodies rather open with a hairy margin and a clearly visible greyish to pale buffish hymenium; hairs 30-110 µm long. Fruitbody 0,2-0,5 mm wide; hymenium depressed; asci IKI+ (blue), 30-60 x 5-8,5 µm, 8-spored, without croziers; spores drop- to spindle-shaped, 6-10 x 2,5-3 µm, Qav. ≈ 3, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 30-110 µm long, hyaline, smooth , I+ (dextrinoid); known from wood of *Alnus, Fagus, Populus, Quercus, Salix, Sorbus, Tilia* and *Ulmus*; rare or overlooked ..... ***Olla transiens***

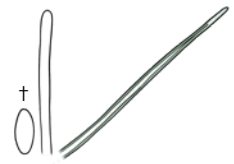


36. Hairs branched ..... see *Hyalopeziza racemosa*, cpl. xx

Hairs unbranched 37

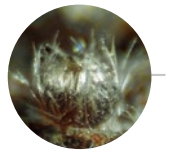
37. Some hairs longer than 100 µm; apical apparatus I+ (blue) 38

All hairs shorter than 100 µm; apical apparatus I- or faintly IKIrr 40

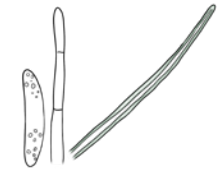


38. On the spiny burrs (cupules) of *Castanea sativa*; spores less than 6 µm long.Fruitbody ca. 0,3 mm wide, sessile; hymenium whitish; asci I+, ca. 40 x 5 µm, 8-spored; spores ellipsoid, ca. 5 x 2 µm, Qav. ≈ 2,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 100-250 µm long, hyaline; rare ..... ***Hyalopeziza spinicola***

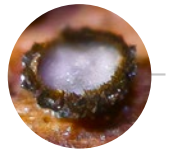
Habitat different 39



39. On deciduous wood. Fruitbody 0,3-1 mm wide, sessile; hymenium depressed, whitish to dark brown; asci IKI+ (blue), 40-60 x 4,5-7 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 6-14 x 2-3 µm, Qav. ≈ 4, smooth, 1-2-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs 100-270 µm long, hyaline, smooth; known from wood of *Alnus* and *Salix*; rare or overlooked ..... ***Hyalopeziza alni***



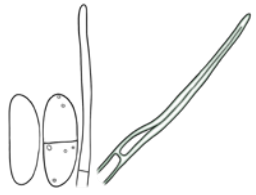
On dicot herbs. Fruitbody 0,1-0,2 mm wide, sessile; hymenium whitish; asci IKI+ (blue), 55-90 x 5-7 µm, 8-spored; spores ellipsoid to spindle-shaped, 6,5-10,5 x 2 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents unknown; paraphysis tips cylindrical; marginal hairs 70-205 µm long, hyaline, smooth; known from dead leaves tof an unknown dicot herb; rare or overlooked ..... ***Hyalopeziza tianschanica***



40. Spores shorter than 9 µm 41

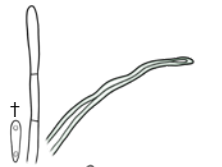
Spores longer than 10 µm 43

41. On deciduous wood; spores 2,5-3,5 µm wide. Fruitbody 0,1-0,3 mm wide, sessile; hymenium depressed, pale brown to greyish; asci 35-55 x 5-7 µm, 8-spored, without croziers; spores ellipsoid, 7-9 x 2,5-3,5 µm, Qav. ≈ 2,7, smooth, 1-2-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs 50-100 µm long, hyaline, smooth or with goo; known from wood of *Alnus, Calluna, Rhododendron ferrugineum* and *Salix*; rare or overlooked ..... ***Hyalopeziza nectrioidea***

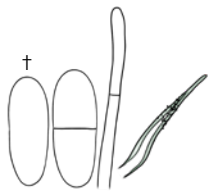


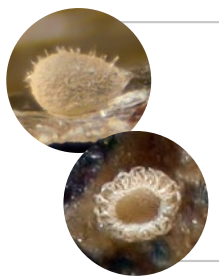
On herbs including *Lycopodium*; spores 1,5-2,5 µm wide 42

42. On *Lycopodium*; asci 15-20 µm long; hairs smooth. Fruitbody 0,1-0,3 mm wide, sessile; hymenium depressed, reddish to dark brown; margin and flank with hairs; asci I-, 15-20 x 4 µm, 8-spored; spores cylindrical to drop-shaped, 4-6 x 1,5-1,5 µm, Qav. ≈ 3,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 20-40 µm long, hyaline, smooth; rare or overlooked ..... ***Hyalopeziza rubefaciens***
On leaves of *Quercus* trees and conifer needles; asci 25-35 µm long; hairs ± warted. Fruitbody 0,05-0,2 mm wide, sessile; hymenium depressed to flat, whitish; asci I-, 25-33 x 3,5-5 µm, 8-spored, with croziers; spores ellipsoid, 4,5-8 x 1,8-2,4 µm, Qav. ≈ 2,5-3,5, smooth, 1-celled, oil contents ≈ 0-10%; paraphysis tips ± cylindrical; marginal hairs 15-80 µm long, hyaline; rare or overlooked ..... ***Hyphopeziza pygmaea* s.l.**[5]

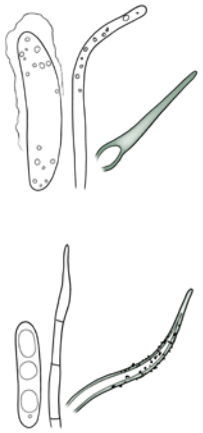


43. Spores 3,5-6 µm wide, Qav. ≈ 3. Fruitbody 0,2-0,6 mm wide, sessile; hymenium depressed to flat, whitish to pale coral; asci I-, 55-130 x 8-12 (-16) µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 9-18 x 3,5-6 µm, smooth, 1-celled, oil contents ≈ 0-10%; paraphysis tips cylindrical; marginal hairs 25-50 µm long, hyaline, smooth and often with goo; known from dead stems of *Cirsium spinosissimum* and *Angelica archangelica*; rare or overlooked ..... ***Hyalopeziza latispora* ss. auct.**
Spores 2-3,5 mm wide, Qav. above 4 44



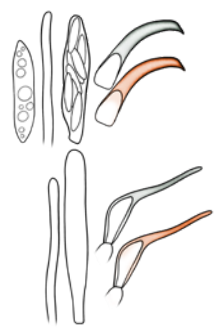


44. Hairs massive and tapering from a rather wide, hollow base; spores ± spindle-shaped, with a slime coating.Fruitbody 0,1-0,25 mm wide, sessile; hymenium flat to arched, buffish to pale brown; asci I- or faitly IKIrr (red before and after pretreatment), 40-65 x 6-8 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 12-21 x 2,5-3,5 µm, Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical, sometimes bend; marginal hairs 30-50 µm long, hyaline, smooth; known from dead parts of dicot herbs; rare or overlooked ..... ***Laetinaevia raripila***
Hairs thick-walled but hollow and only weakly tapering; spores ± cylindrical, without a slime coating. Fruitbody 0,2-0,5 mm wide, sessile; hymenium depressed, buffish to pale brown; asci I-, 34-55 x 7-9 µm, 8-spored, with croziers; spores cylindrical to slightly bend, 9-14,5 x 2-2,5 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 10-50%; paraphysis tips cylindrical to tapering; marginal hairs 30-60 µm long, hyaline to glassy, smooth, finely warty or with goo; known from dead leaves of dicot herbs and deciduous trees; rare or overlooked ..... ***Hyalopeziza niveocincta***

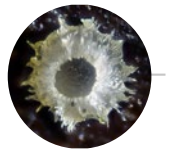


45. Apical apparatus I- ..... [*Unguicularia*] 46
Apical apparatus I+ ..... [*Urceolella*] 47

46. On needles of conifers. Fruitbody 0,2-0,4 mm wide; hymenium flat to arched, hyaline to whitish; asci I-, 25-35 x 4,5-6 µm, 8-spored, without croziers; spores spindle-shaped, 10-12,5 x 2,5-2,8 µm, Qav. ≈ 4, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 40-95 µm long and massive, hyaline but strongly dextrinoid, smooth , I+ (dextrinoid); known from needles of *Abies* and *Picea*; rare or overlooked ..... ***Unguicularia unguiculata***
On dicot stems. Fruitbody 0,2-0,6 mm wide; hymenium flat to arched, dark brown; asci I-, 30 x 4 µm, 8-spored; spores cylindrical to drop-shaped, 5-7 x 1-1,5 µm, Qav. ≈ 5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs up to 70 µm long, hyaline, smooth , I+ (dextrinoid); known from dead stems of *Epilobium hirsutum*; rare or overlooked ..... ***Unguicularia dilatopilosa***

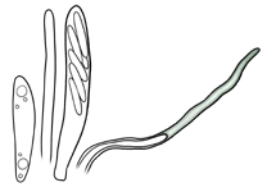


5. The species was described from leaves of *Quercus*, but there are similar material from conifer needles. There are also differences in hair shape between various collections, so this is probably a species complex.

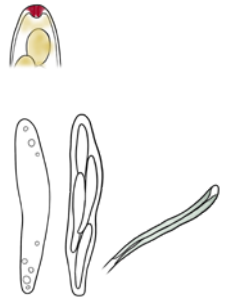


47. On ferns or clubmosses 48
On other hosts 52

48. With tufted or tangential, 85-120 µm long hairs, easily seen with a hand lens. Fruitbody 0,1-0,5 mm wide; hymenium depressed, hyaline to whitish; asci IKI+ (blue), 30-58 x 6,5-7,5 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 6-16 x 1,5-2,8 µm, Qav. ≈ 5, smooth, 1-(2)-celled; paraphysis tips cylindrical; marginal hairs massive, hyaline, smooth; known from stems and leaves of *Athyrium filix-femina, A. alpestre, Dryopteris filix-mas* and *Matteuccia*; rare or overlooked ..... ***Urceolella carestiana* sensu auct.**
With more adpressed, shorter hairs 49



49. Ascus top red (IKIrr) in lugol; hairs with thin, hooked tips ..... see *Urceolella pani*, cpl. xx
Apical apparatus blue in lugol; hairs with broader, straight or bend tips 50

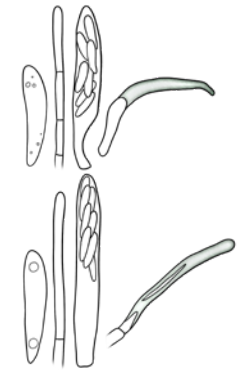




50. Spores 13-22 µm long; asci 4-spored. Fruitbody 0,2-0,3 mm wide; hymenium depressed, hyaline to buffish; asci IKI+ (blue), 30-50 x 5-7 µm; spores drop- to tadpole-shaped, 13-22 x 2-3,5 µm, Qav. ≈ 6,5, smooth, 1-2-celled; paraphysis tips cylindrical; marginal hairs 25-60 µm long, hyalin, smooth; known from of *Athyrium filix-femina* and *A. alpestre*; rare or overlooked ..... ***Urceolella tetraspora***
Spores up to 14 µm long, but mostly shorter 51



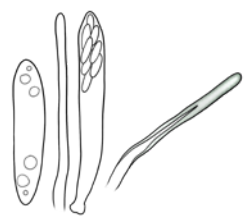
51. On *Osmunda*. Fruitbody 0,2-0,4 mm wide; hymenium depressed, hyaline to whitish; asci IKI+ (blue), 40-60 x 6-8 µm, 8-spored, with croziers; spores drop-shaped, 10-13 x 2-3 µm, Qav. ≈ 4,5, smooth, 1-celled; paraphysis tips cylindrical to club-shaped; marginal hairs up to 50 µm long, hyaline, smooth; rare or overlooked ..... ***Urceolella aspera***
On other ferns. Fruitbody 0,1-0,3 mm wide, with a stem; hymenium depressed, hyaline to whitish; asci IKI+ (blue), 50-60 x 6-8,5 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 9-14 x 2-3 µm, Qav. ≈ 4,5, smooth, 1-celled; paraphysis tips cylindrical to tapering; marginal hairs 20-40 µm long, hyaline, smooth; known from leaves and stems of *Athyrium felix-femina* and *Matteucia strutiopteris*; rare or overlooked ..... ***Urceolella winteriana***



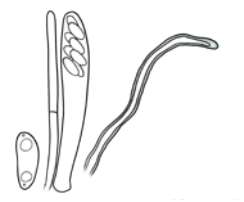


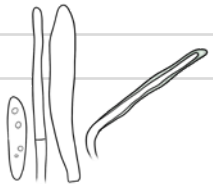
52. On parts of trees 53
On parts of herbs 55

53. Spores 10-20 µm long. Fruitbody 0,5-2 mm wide, with a stem; hymenium depressed to flat, hyaline to whitish; asci IKI+ (blue), 35-70 x 4-8 µm, 4-8-spored, with croziers; spores spindle-shaped, 10-20 x 3-5 µm (ofte divided into two sizes, about 10-12 x 3-3,5 µm from 8-spores asci and larger from 4-spored), Qav. ≈ 4, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 40-150 (-250) µm long, hyaline, smooth; known from dead needles of *Abies*, *Juniperus* and *Thuja*, but also from deciduous leaves; rare or overlooked ..... ***Urceolella juniperi***
Spores shorter than 10 µm 54



54. Spores 4,5-6,5 µm long. Fruitbody 0,3-1 mm wide; hymenium depressed to flat, hyaline to whitish; asci IKI+ (blue), 25-45 x 4-6 µm, 8-spored, with croziers; spores ellipsoid to drop-shaped, 4,5-6,5 x 1,5-2,5 µm, Qav. ≈ 3, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 60-160 µm long, hyaline, smooth; known from dead leaves of *Betula, Populus, Quercus* and *Salix caprea*; rare or overlooked ..... ***Urceolella hirta***
Spores 6-10 µm long. Fruitbody 0,1-0,2 mm wide, with a stem; hymenium depressed to flat, hyaline to whitish; asci I+, 30-42 x 3,5-6 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 6-10 x 2-2,5 µm, Qav. ≈ 3,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs up to 130 µm long, hyaline, smooth; known from dead leaves of





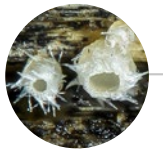
deciduous trees; rare or overlooked ..... ***Urceolella appressipila***

55. Hairs branched. ..... 56[6]
Hairs unbranched 57

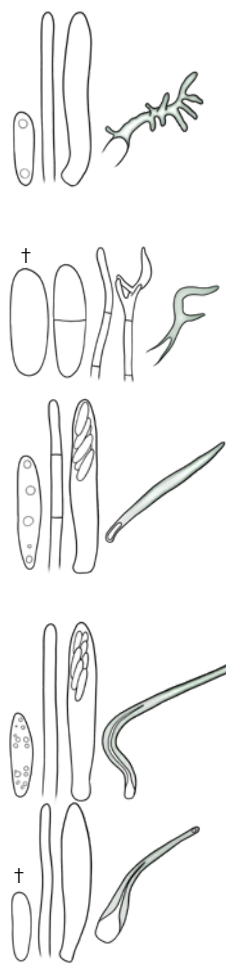
56. On stems of *Equisetum*; spores 6,5-8 x 1,5-2 µm; apical apparatus asci IKI+ (blue). Fruitbody 0,1-0,4 mm wide, with a stem; hymenium depressed to flat, hyaline to whitish; asci 30-40 x 4-5 µm, 8-spored, with croziers; spores cylindrical to sausage-shaped, Qav. ≈ 4, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs branched, up to 50 µm long, hyaline, smooth; known from dead stems of *Equisetum sylvaticum*; rare or overlooked ..... ***Urceolella equiseti***
On dicot herbs; spores 10-14 x 3-4,5 µm; apical apparatus J- or IKIrb (red, blue after pretreatment). Fruitbody 0,1-0,3 mm wide, sessile; hymenium depressed, whitish; asci 55-95 x 8,5-11.5 µm, 8-spored, with croziers; spores ellipsoid, Qav. ≈ 3, smooth, 1-2-celled, oil contents ≈ 0%; paraphysis tips tapering, often branched; marginal hairs 35-60 µm long, hyaline, smooth; known from dead stems of *Cirsium spinosissimun*; rare or overlooked ..... ***Hyalopeziza racemosa***



57. On dead leaves of *Saxifraga*; spores on average longer than 10 µm. Fruitbody 0,1-0,4 mm wide, with a stem; hymenium depressed to flat, hyaline to clay pink; asci IKI+ (blue), 40-65 x 6-9 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 8-16 x 2-3 µm, Qav. ≈ 5, smooth, 1-celled; paraphysis tips cylindrical to tapering; marginal hairs 40-75 µm long, hyaline, smooth; known from *Saxifraga aizoon*; rare ..... ***Urceolella saxifragae***
On other hosts; spores on average shorter than 10 µm 58



58. With tangential, 50-170 µm long hairs, easily seen with a hand lens. Fruitbody 0,1-0,3 mm wide; hymenium depressed to flat, hyaline to whitish; margin and flank with hairs; asci IKI+ (blue), 30-40 x 4-6 µm, 8-spored, with croziers; spores spindle-shaped, 4,5-10,5 x 1,5-2,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 10-25 to 10-25%; paraphysis tips cylindrical; marginal hairs hyaline, smooth; known from dead stems various larger dicot herbs; rare or overlooked ..... ***Urceolella crispula***[7]
With more adpressed, up to 30 µm long hairs. Fruitbody 0,1-0,3 mm wide; hymenium depressed to flat, hyaline to whitish; asci I+, 25-35 x 4-7 µm, 8-spored; spores ellipsoid to spindle-shaped, 6-8 x 1,5-2 µm, Qav. ≈ 4, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs hyaline, smooth; known from dead stems and leaves of *Aconitum ranunculifolium*; rare or overlooked ..... ***Urceolella nivea***



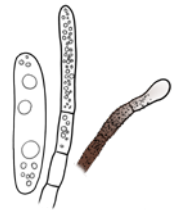
6. See also *Mollisina* (key B) with VBs in paraphyses or hairs.

7. Some authors recognise *Urceolella aasii* with more brownish orange colours and even longer hairs (up to 250 µm).



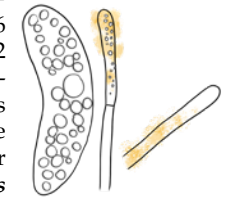
Key D – hairy discs with a pruinose hymenium

1. Flank hairs blackish. Fruitbody 0,2-0,5 mm wide, sessile; hymenium flat, greyish; asci IKIr (direct red), 55-85 x 8-12 µm, 8-spored, without croziers; spores drop- to spindle-shaped, 12-18 x 4-5 µm, Qav. ≈ 3,5, smooth, 1-4-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical, with guttules; marginal hairs 20-50 µm long, brown to blackish, smooth; known from dead stems of *Molinia coerulea*; summer–autumn; rare or overlooked ..... ***Cejpia hystrix***
Flank hairs white or yellowish 2





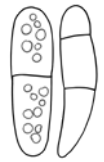
2. Paraphyses and hairs heavily encrusted by yellowish lumps of pigment; on dry branches of *Pinus*, sometimes on resin. Fruitbody 0,1-0,6 mm wide, sessile; hymenium flat, yellowish; asci I-, 75-155 x 13,5-22 µm, 8-spored, without croziers; spores bend-spindle-shaped to sausage-shaped, 16-27 x 5-7,5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 50-80%; paraphysis tips cylindrical, protruding 12-15 µm above the asci; marginal hairs 15-50 µm long; spring–summer–autumn; rare or overlooked ..... ***Chrysodisca peziculoides***
Paraphyses and hairs not heavily encrusted by yellowish pigment; on different hosts 3



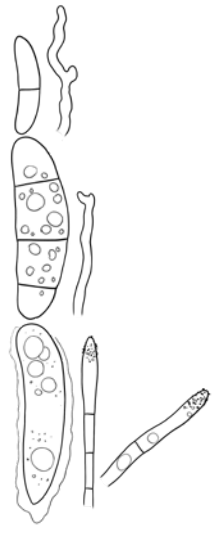


3. Spores 1-4-celled; paraphyses strongly branched; hairs thin and curly ..... [*Polydesmia*] 4
Spores 1-celled; paraphyses cylindrical to lance-shaped; hairs more robust and tapering ..... [*Coronellaria*] 6

4. On thalli of the lichen genus *Peltigera*. Fruitbody 0,05-0,4 mm wide, sessile; hymenium flat to arched, whitish; asci I?, 83-120 x 9-13 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 10-25 x 3-5 µm, Qav. ≈ 4,5, smooth, 1-4-celled, oil contents ≈ 25%; known from lichens of Peltigera; summer–autumn–winter; rare or overlooked ..... ***Polydesmia lichenis***
Not on lichens 5



5. Spores 7,5-14 µm long. Fruitbody 0,1-1 mm wide, sessile; hymenium flat to arched, yellowish to whitish; asci IKI+ (blue), 50-80 x 7-8 µm, 4-8-spored, with croziers; spores spindle- to bend-spindle-shaped, 7,5-14 x 2-3,5 µm, Qav. ≈ 4, smooth, 1-4-celled, oil contents ≈ 25%; known from fruit pods, capsules and twigs of *Mimosa, Eucapyptus* and *Quercus*; autumn; rare or overlooked ..... ***Polydesmia fructicola***
Spores 13-24 µm long. Fruitbody 0,3-1,5 mm wide, sessile; hymenium flat to arched, whitish to yellowish; asci IKI+ (blue), 85-120 x 8-13 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 13-24 x 3,5-5,5 µm, Qav. ≈ 4, smooth, 1-4-celled, oil contents ≈ 50-80%; mostly on old pyrenomycetes, more rarely on wood and debris; winter; rare or overlooked ..... ***Polydesmia pruinosa***[8]

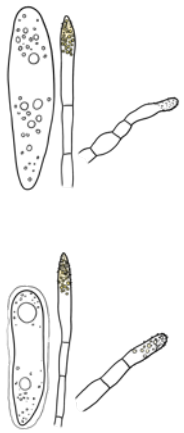


6. On *Schoenoplectus lacustris*. Fruitbody 0,2-0,5 mm wide; hymenium ± flat, pale greyish; asci IKIrb (red, blue after pretreatment), 65 -110 x 9-15 µm, 8-spored, with or without croziers; spores spindle-shaped, 18-24 x 4-5,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 50-80%, sometimes with a surrounding slime coating; paraphysis tips lance-shaped; marginal hairs 60-150 µm long, hyaline to pale brown; rare or overlooked; summer–autumn ..... ***Coronellaria pulicaris***[9]
On other hosts 7

8. *Polydesmia turbinata* is described as more yellow, but may be conspecific.

9. The generic type *Coronellaria delitschiana*, also on *Schoenoplectus lacustris*, should have larger spores (25-40 x 6-7 µm). A modern interpretation of this taxon is, however, missing.

7. Asci without croziers; hairs 15-50 µm long. Fruitbody 0,2-0,6 mm wide, sessile; hymenium flat, whitish, greyish to yellowish; asci IKIrb (red, blue after pretreatment), 70-100 x 11-14 µm, 8-spored; spores drop-, spindle- to bend-spindle-shaped, 16-26 x 4-5,3 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 25-50%, with surrounding slime coating; paraphysis tips cylindrical to lance-shaped; marginal hairs hyaline to pale brown; known from of *Carex rostrata* and *Eriophorum*; rare or overlooked; summer ..... ***Coronellaria benkertii***
Asci with or without croziers; hairs 30-100 µm long. Fruitbody 0,1-0,3 mm wide, sessile; hymenium flat, whitish to greyish; asci IKIrb (red, blue after pretreatment), 70-90 x 13,5-15 µm, 8-spored; spores cylindrical to spindle-shaped to sausage-shaped to drop-shaped, 12-20 x 3,8-5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 25-50%, with surrounding slime coating; paraphysis tips cylindrical to lance-shaped, protruding above the asci; marginal hairs hyaline; known from of *Carex elata, Carex rostrata* and *Trichophorum caespitosum*; rare or overlooked; spring–summer ..... ***Coronellaria caricinella* s.l.**



Key E – hairy discs on a whitish subiculum



1. Flesh greyish, of globose cells ..... see *Mollisia* and similar, p. xxx
Flesh not greyish, of oblong cells 2

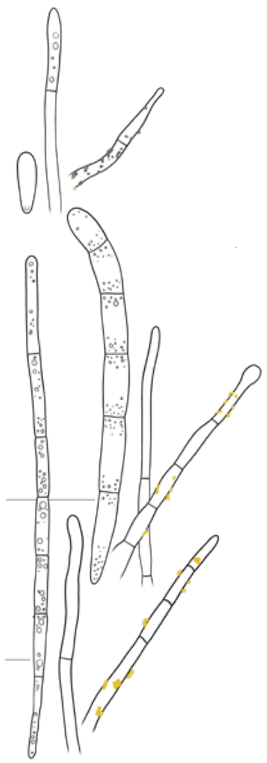
2. Hymenium dark brown (); spores 4-7,5 µm long. Fruitbody 0,2-0,8 mm wide; hymenium ± flat; with a pale subiculum; asci IKI+ (blue), 30-50 x 4-5,5 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 4-7,5 x 1,5-2,5 µm, Qav. ≈ 2,9, smooth, 1-celled; paraphysis tips ± cylindrical; marginal hairs 30-40 µm long, hyaline, smooth or with goo; on exposed wood of *Quercus*; rather common ..... ***Eriopezia caesia***
Hymenium paler or coloured; spores longer 3

3. Spores longer than 30 µm 4
Spores shorter 5



4. Spore Qav. below 20; spores 2-4-6-celled, rarely 8-celled. Fruitbody 0,2-1 mm wide; hymenium ± flat, whitish; with a pale subiculum; asci IKI+ (blue), 80-130 x 9-13 µm, 8-spored, with croziers; spores thread- to cucumber-shaped, 30-61 x 2-4 µm, smooth; paraphysis tips cylindrical; marginal hairs 45-130 µm long, hyaline, smooth or with yellowish goo; on wood and debris of coniferous and deciduoua trees; rare or overlooked ..... ***Arachnopeziza delicatula* s.l.**
Spore Qav. above 20; spores 6-8-celled. Fruitbody 0,2-1 mm wide; hymenium ± flat, whitish to yellowish; with a pale subiculum; asci IKI+ (blue), 80-115 x 8-11 µm, 8-spored, with croziers; spores thread-shaped, 50-78 x 1,5-3 µm, smooth; paraphysis tips cylindrical; marginal hairs 60-125 µm long, hyaline, smooth but encrusted to with yellowish goo; on wood of deciduous trees; rather common ..... ***Arachnopeziza aurata***

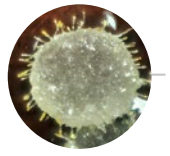
5. Hairs or hymenium with yellowish or orange () colours 6
White or hyaline () all over 10



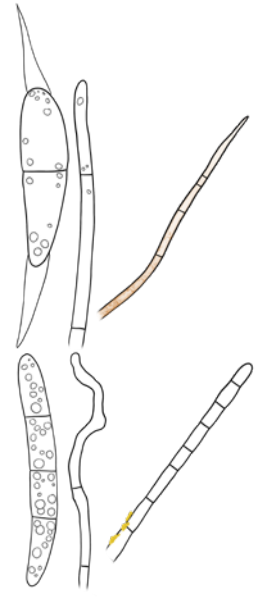


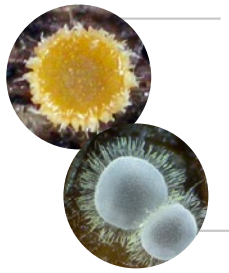
6. Without hairs ..... see *Arachnopeziza sphagniseda*, page xx
With hairs 7

7. Hairs orange (), 100-500 µm long; on wood and debris of *Quercus*. Fruitbody 0,5-4 mm wide; hymenium ± flat, buffish, pinkish to pale orange; with a pale subiculum; asci IKI+ (blue), 65-100 x 7,5-10 µm, 8-spored, with croziers; spores spindle-shaped, 14-22,5 x 3-4,5 µm, Qav. ≈ 5, smooth, 2-4-celled, as alive with conical apical gel-like appendages; paraphysis tips cylindrical; marginal hairs tapering, ±, smooth; rather rare ..... ***Arachnopeziza aurelia***
Hairs ± hyaline, white to pale yellowish () by coloured goo, up to 125 µm long; on a wide range of substrates including *Quercus* 8



8. Spores on average longer than 18 µm, as alive with more than 30% oily contents. Fruitbody 0,2-1 mm wide; hymenium ± flat, whitish to yellowish; with a pale subiculum; asci IKI+ (blue), 60-90 x 8-13 µm, 8-spored, with croziers; spores bend-spindle-shaped, 16-30 (-36) x 3-4,5 µm, Qav. ≈ 6, smooth, 1-2-4-celled; paraphysis tips cylindrical to gnarled; marginal hairs 65-125 µm long, hyaline, smooth but with yellowish goo; on wood and debris of coniferous and deciduous trees; rare or overlooked ..... ***Arachnopeziza obtusipila***
Spores on average shorter than 18 µm, with less than 30% oily contents 9





9. Fresh hymenium dark orange; hairs finely warty, often fused into triangular teeth. Fruitbody 0,15-0,3 mm wide; hymenium ± flat; subiculum very sparse; asci IKI+ (blue), 60-75 x 7-9 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 9-19 x 2,5-4 µm, Qav. ≈ 4,5, smooth, 2-4-celled; paraphysis tips club-shaped to gnarled; marginal hairs 40-120 µm long, hyaline, smooth but encrusted to with yellowish goo; known from deciduous wood; rare or overlooked ***Arachnopeziza trabinelloides***

Fresh hymenium hyalin to pale peach; hairs ± smooth, but with lumps of goo, free. Fruitbody 0,5-2 x 0,5-1 mm; hymenium ± flat; with a pale subiculum; asci IKI+ (blue), 70-90 x 8-11 µm, 8-spored, with croziers; spores spindle-shaped, 13-20 x 3-4 µm, Qav. ≈ 4,5, smooth, 1-2-celled; paraphysis tips cylindrical; marginal hairs up to 100 µm long, smooth; on deciduous wood, e.g. *Populus*; rare or overlooked ***Arachnopeziza leonina***



10. Spores shorter than 13 µm; the unorderly hairs spreading into a small patch below the fruitbody but without a proper subiculum (fruitbodies reminding of the cyphelloid fungus *Crepidotus pallisus*). Fruitbody 0,4-1,5 mm wide; hymenium ± flat, whitish; asci IKI+ (blue), 40-60 x 5-7 µm, 8-spored, with croziers; spores spindle-shaped, 7-13 x 1,5-3 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 1,5%; paraphysis tips cylindrical; marginal hairs 35-100 µm long, smooth; known from fruits of *Castanea* and from wood and debris of other deciduous trees; rare or overlooked ***Arachnoscypha aranea***[10]

Spores on average longer than 13 µm; hairs more orderly, 11

11. Living spores with conical apical gel-like appendages; on male flowers of *Fagus* or on mosses 12

Living spores without appendages; on deciduous wood or *Sphagnum* 13

12. Hairs free; on male flowers of *Fagus*. Fruitbody 0,3-0,6 mm wide; hymenium ± flat; asci IKI+ (blue), 100-130 x 10-11 µm, 8-spored, with croziers; spores spindle shaped, 14-18 x 3,5-4,5 µm, Qav. ≈ 4, smooth, 2-4-celled; paraphysis tips cylindrical; marginal hairs 120-180 µm long, hyaline, smooth; rare or overlooked ***Arachnopeziza floripila***



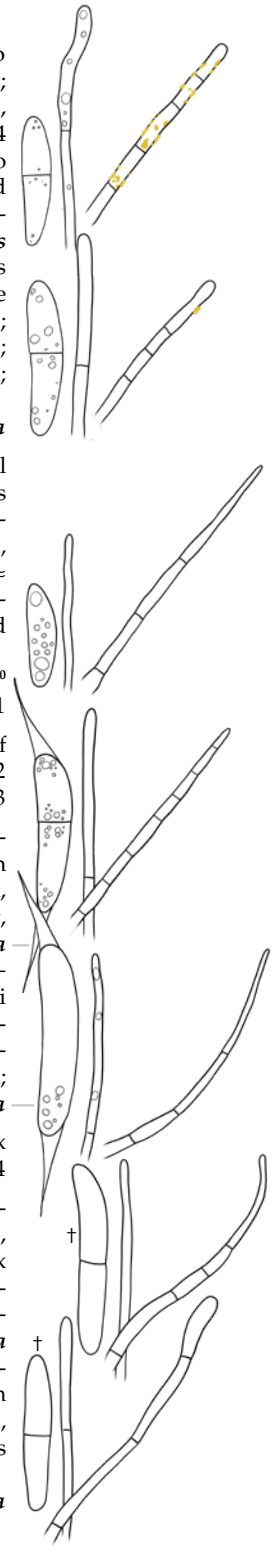
Hairs often fused into triangular teeth; on or around the moss *Ptilidium pulcherrimum*. Fruitbody 0,3-0,7 mm wide; hymenium ± flat; asci IKI+ (blue), 70-100 x 6-12 µm, 8-spored, with croziers; spores spindle-shaped, 15,5-23,5 x 4-5,5 µm, Qav. ≈ 4, smooth, 1-2-celled; paraphysis tips cylindrical; marginal hairs 80-130 µm long, hyaline, smooth; rare or overlooked ***Arachnopeziza ptilidiophila***

13. On deciduous wood see *Arachnopeziza leonina*, cpl. 9xx

On *Sphagnum* 14

14. Hair endings cylindrical to tapering. Fruitbody 0,3-0,5 mm wide; hymenium ± flat, whitish; asci IKI+ (blue), 70-90 x 6-10 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 15,5-23 x 3-4,5 µm, Qav. ≈ 5, smooth, 1-2-4-celled; paraphysis tips cylindrical; marginal hairs 50-90 µm long, hyaline, smooth; rare or overlooked ***Arachnopeziza estonica***

Hair endings somewhat capitate. Fruitbody 0,3-0,6 mm wide; hymenium ± flat, whitish; asci IKI+ (blue), 70-90 x 6-10 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 12,5-21,5 x 2,5-4 µm, Qav. ≈ 5, smooth, 2-3-celled; paraphysis tips cylindrical; marginal hairs 50-80 µm long, hyaline, smooth; rare or overlooked ***Arachnopeziza japonica***



10. *Arachnoscypha aranea* and *Arachnopeziza eriobasis* are morphologically identical. The first is known from fruits of *Castanea*, whereas the latter is reported from wood and debris of various deciduous trees. We here treat them as synonyms.

Key F – dark-setose discs (e.g. *Torrendiella* and *Venturiocistella*)

1. Spores broader than 3 µm; only with long blackish setae or with setae and curled, dark hairs 2

Spores more narrow; with long blackish setae at the flank and smaller, club-shaped hairs at the margin [*Venturiocistella*] 7

2. Fruitbodies ± sessile 4

Fruitbodies with an obvious stem 5

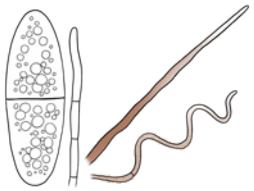
3. Hairs cylindrical and ± wavy; on Pinus see *Venturioscypha nigropila*, Ixx

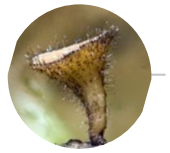
Hairs tapering, straight; on monocot herbs 4



4. Apparent setae actually a black, setose asexual state surrounding the fruitbodies, actual marginal hairs 45-90 long with bend tips; spores 15-19 µm long see *Phaeoscypha cladii*, cpl. xxx

Setae situated at the fruitbody, up to 165 µm long and mixed with long, curly hairs; spores 19-24 µm long. Fruitbody 0,2-0,5 mm wide; hymenium flat, greyish creme; asci IKI+ (blue), 65-100 x 12-16 µm, 8-spored, with croziers; spores spindle-shaped, 19-24 x 5,5-6 µm, Qav. ≈ 3,5, smooth, 1-septate, as overmature 3-4-celled and pale brown, oil contents ≈ 50-80%; paraphysis tips cylindrical, protruding 15-30 µm above the asci; known from dead stems of *Deschampsia caespitosa*; rare or overlooked ***Helicoscypha heterotricha***





5. Hymenium greyish to buffish (); spores strongly bend, with rounded ends; on dead leaves of *Cistus*, *Rubus* and evergreen *Quercus* species. Fruitbody 0,5-1,7 x 1-2 mm, with a hairy stem; hymenium flat; asci IKI+ (blue), 115-140 x 13-14 µm, 8-spored, without croziers but with a crozier-like protuberance; spores bend-spindle-shaped, 15-21,5 x 5,5-6,5 µm, Qav. ≈ 3, smooth, 1-celled, with age 2-4-celled, oil contents ≈ 50-80%, with a loosening outer wall; paraphysis tips cylindrical; marginal hairs 200-350 µm long, blackish, smooth; rare or overlooked ***Torrendiella ciliata***



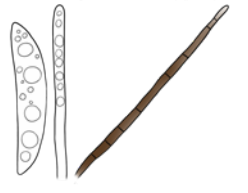
Hymenium ± yellowish (); spores at most slightly bend, with acute ends; on leaves of *Acacia*, *Eucapyptus*, *Myrica*, and *Nothofagus* 6



6. On dead leaves of *Nothofagus*. Fruitbody 1-2 x 1-3 mm, with a hairy stem; hymenium flat, yellowish to buff-yellow; asci IKI+ (blue), 115-150 x 9-11 µm, 8-spored, croziers ?; spores spindle-shaped, 16-17,5 x 4-6 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 10-25-50%; paraphysis tips cylindrical to club-shaped; marginal hairs 150-500 µm long, blackish, smooth; rare or overlooked ***Hymenotorrendiella andina***

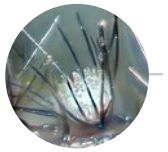


On dead leaves of *Acacia*, *Eucapyptus*, and possibly *Myrica*. Fruitbody 0,4-2,5 x 1-3 mm, with a hairy stem; hymenium flat, yellowish to buff-yellow; asci IKI+ (blue), 100-130 x 9,5-11 µm, 8-spored, without croziers; spores spindle-shaped, 16-19 x 4-5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 50%, with a 1-ended slime coating; paraphysis tips cylindrical to club-shaped; marginal hairs 220-310 µm long, blackish, smooth; rare or overlooked ***Hymenotorrendiella eucalypti***

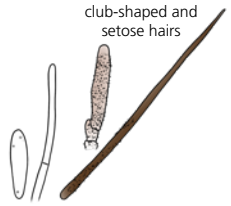


7. Spores shorter than 10 µm 8

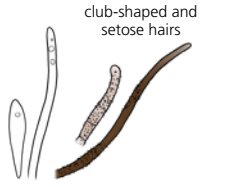
Spores longer than 10 µm 9



8. Hairs of the flank 70-200 µm long; on leaves of *Betula* and *Quercus*. Fruitbody 0,1-0,15 mm wide; hymenium flat, greyish; asci probably IKI+ (blue), 20-28 x 5,5-7,5 µm, 8-spored, with croziers; spores spindle-shaped, 6-9 x 1,5-2,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical; marginal hairs 16-40 µm long, flank hairs 75-200 µm long, blackish, smooth to warty; rare or overlooked ***Venturiocistella diversipila***



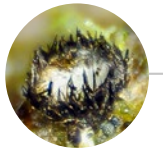
Hairs of the flank shorter than 70 µm; on leaves of *Vaccinium uliginosum*. Fruitbody 0,15-0,3 mm wide; hymenium flat, greyish to buffish; asci IKI+ (blue), 26-46 x 4,5-6 µm, 8-spored, with croziers; spores spindle- to drop-shaped, 7-10 x 1,5-2 µm, Qav. ≈ 5, smooth, 1-celled; paraphysis tips cylindrical, protruding µm above the asci; marginal hairs 15-35 µm long, flank hairs 65-250 µm long, blackish, smooth to warty; rare or overlooked ***Venturiocistella venturioides***



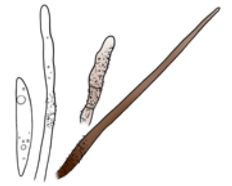
9. Spores 17-22 µm long; apical apparatus red in lugol (IKIrr/rb); on bark of *Ulex*. Fruitbody 0,1-0,2 mm wide; hymenium flat, greyish; asci 30-40 x 7,5-8 µm, 8-spored, with croziers; spores drop-, spindle- to bend-spindle-shaped, 17-22 x 1,5-2,5 µm, Qav. ≈ 10, smooth, 1-4-celled, oil contents ≈ 10%; paraphysis tips cylindrical; marginal hairs 30-60 µm long, flank hairs 80-150 µm long, blackish, smooth to warty; rare or overlooked ***Venturiocistella ulicicola***



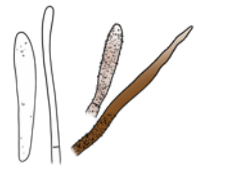
Spores 10-17,5 µm long; apical apparatus blue in lugol; on *Pinus* or *Vaccinium* 10



10. On bark of *Pinus*. Fruitbody 0,15-0,5 mm wide; hymenium flat, greyish to buffish; asci IKIr (direct red), 30-40 x 7,5-9,5 µm, 8-spored, with croziers; spores spindle-shaped, 10-14 x 1,7-2,5 µm, Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs 20-32 mm long, outer surface hairs 50-100 µm long, blackish, smooth to warty; rare or overlooked ***Venturiocistella pini***



On leaves of *Vaccinium uliginosum*. Fruitbody 0,2-0,4 mm wide; hymenium flat, greyish to buffish; asci IKI+ (blue), 32-60 x 4-8 µm, 8-spored, without croziers; spores drop-, spindle- to bend-spindle-shaped, 12-17,5 x 2-3 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical; marginal hairs 25-70 µm long, flan hairs 45-90 µm long, blackish, smooth to warty; rare or overlooked ***Venturiocistella uliginosa***

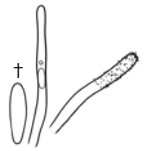


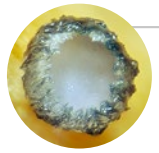
Key G – hairy discs with blunt, ± club-shaped, warty hair tips (*Cistella, Hyphosidcus* and others)

1. On mosses, ferns or lycopods 2
   On other substrates 10

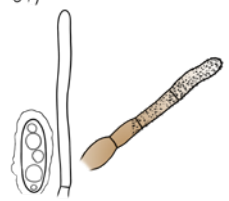
2. On lycopods 3
   On mosses or ferns 4

3. Hairs whitish; spores more narrow than 2 µm; on the lycopod *Diphasiastrum complanatum*. Fruitbody 0,1-0,2 mm wide, sessile; hymenium depressed to flat, whitish to yellowish; asci I+, 15-30 x 4-5 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 5-9 x 1,5-2 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical; marginal hairs 20-55 µm long; rare or overlooked; summer ***Cistella spicicola***



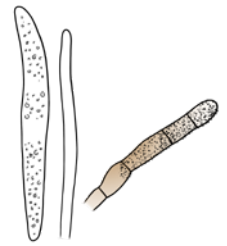


Hairs greyish brown; spores wider than 2 µm; on *Lycopodium*. Fruitbody 0,2-0,3 mm wide, sometimes with a short stem; hymenium depressed, pale greyish; asci IKI+ (blue), 40-50 x 8-10 µm, 8-spored, with croziers; spores spindle-shaped, 6-9,5 x 2-4 µm, Qav. ≈ 2,6, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical; marginal hairs 35-120 µm long; spring–summer–autumn; rare or overlooked ***Fuscolachnum inopinatum***



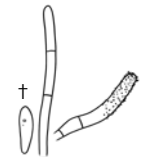
4. On mosses 5
   On ferns 7

5. On *Polytrichum juniperinum*; spores 20-34 µm long. Fruitbody up to 0,3 mm wide, with a short stem; hymenium depressed; asci I-, 70-85 x 6-11 µm, 8-spored, without croziers; spores bend-spindle-shaped, 20-34 x 2-3,5 µm, Qav. ≈ 10, smooth, 1-4-celled; paraphysis tips cylindrical to club-shaped; marginal hairs up to 110 µm long, hyaline to brown; autumn; rare or overlooked ***Fuscolachnum necator***

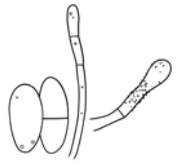


   On other hosts; spores shorter 6

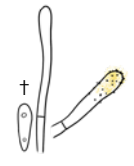
6. On *Bazzania trilobata*; fruitbodies whitish; spores 4-6 x 1,5-2 µm. Fruitbody 0,05-0,2 mm wide, with a somewhat toothed margin and a short stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 19-28 x 4-5,5 µm, 8-spored, with croziers; spores drop-, spindle- to bend-spindle-shaped, Qav. ≈ 2,9, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs up to 50 µm long; rare or overlooked; summer–autumn ***Hyphodiscus delitescens***



   On species of *Polytrichastrum*; fruitbodies greyish, buffish to ± brown; spores 5,5-9 x 2-3 µm. Fruitbody 0,05-0,2 mm wide, with a short stem; hymenium depressed to flad; asci IKIrb (red, blue after pretreatment), 30-45 x 5-8,5 µm, 8-spored, with croziers; spores drop-shaped to spindle-shaped to bend-spindle-shaped, Qav. ≈ 2,9, smooth, 1-2-celled, oil contents ≈ 0%; paraphysis tips cylindrical to club-shaped, protruding µm above the asci; marginal hairs up to 50 µm long, pale brown; rare or overlooked; summer ***Hyphodiscus cajaniensis***

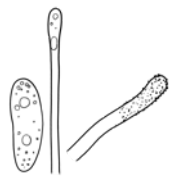


7. Spores 5-6 µm long; apical apparatus I-; known from *Hymenophyllum wilsonii*. Fruitbody 0,2-0,3 mm wide, sessile; hymenium depressed to flat, whitish; asci 17-21 x 4,5-5 µm, 8-spored, with croziers; spores drop- to sausage-shaped, 5-6 x 1,2-1,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips club-shaped and often branched; marginal hairs 12-20 µm long; rare or overlooked; spring ***Cistella hymenophylli***



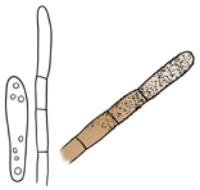
   Spores longer than 6,5 µm; apical apparatus red or blue in lugol; on other ferns 8

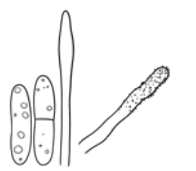
8. Fruitbodies whitish. Fruitbody 0,15-0,3 mm wide, sessile; hymenium depressed to flat, whitish to pale greyish; asci IKIrb (red, blue after pretreatment) or IKI+ (blue), 44-60 x 9-10,5 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 7-11,5 x 3-4,5 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical to club-shaped; marginal hairs 20-100 µm long; known from dead stems and leaves of *Athyrium filix-femina*; rare or overlooked; spring–summer . . . . . ***Cistella helvetica***
Fruitbodies buffish to pale brownish 9





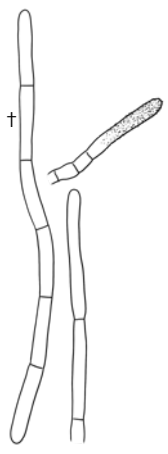
9. Hairs on the outer side brown. Fruitbody 0,1-0,5 mm wide, sometimes with a short stem; hymenium depressed, buffish; asci IKI+ (blue), 35-65 x 6-8 µm, 8-spored, with croziers; spores cylindrical, drop- to cucumber-shaped, 8-15,5 x 2-3 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical; marginal hairs 40-65 µm long, pale brown; on *Athyrium, Dryopteris, Onoclea, Osmunda* and *Pteridium*; spring–summer; rare or overlooked . . . . . ***Fuscolachnum pteridis***
All hairs white. Fruitbody 0,1-0,8 mm wide, sessile; hymenium depressed to flat, buffish; asci IKI+ (blue), 40-60 x 6,5-8 µm, 8-spored, with croziers; spores spindle-shaped, 7-12 x 2-3 µm, Qav. ≈ 4, smooth, 1-2-celled, oil contents ≈ 10%; paraphysis tips cylindrical to lance-shaped; marginal hairs 25-60 µm long; known from dead stems and leaves of *Pteridium aquilinum*; rare or overlooked; autumn–winter . . . . . ***Cistella pteridialis***



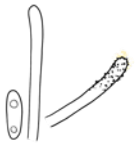


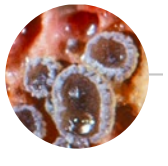
10. Hymenium downy by protruding paraphyses . . see *Coronellaria*, DDxx
Hymenium ± smooth 11

11. Spores thread-shaped, 50-62 µm long. Fruitbody 0,05-0,2 mm wide, sessile; hymenium depressed, whitish; asci I-, 50-75 x 7-12 µm, 8-spored; spores 50-62 x 1,8-2 µm, Qav. ≈ 30, smooth, many-celled, fragmenting, oil contents ≈ 0%; paraphysis tips cylindrical; marginal hairs 20-45 µm long; known from dead leaves of *Salix polaris*; rare or overlooked; summer . . . . . ***Polaroscyphus spetsbergianus***
Spores different 12



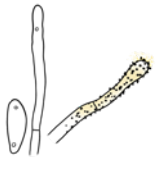
12. Flesh ± gelatinized (textura obliata); hairs often exuding yellowish, brownish to greenish substances in KOH; fruitbodies ofte with brownish or greenish colours; on wood, corticiaceous fungi or polypores . . . . . [*Hyphodiscus*] . . 13
Flesh not gelatinized; hairs not exuding coloured substances in KOH; fruitbodies whitish, cream, yellowish to buff; on wood, leaves or herbacelus stems 22

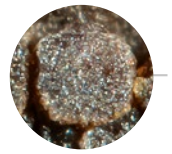




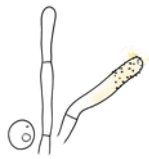
13. On species of the lichen genus *Cladonia*. Fruitbody 0,1-0,3 mm wide, sessile; hymenium depressed to flat, buffish to pale brown; asci IKI+ (blue), 25-30 x 3,5-5,5 µm, 8-spored; spores drop- to spindle-shaped, 5-6,5 x 1,5-2 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical to club-shaped; marginal hairs 10-30 µm long; rare or overlooked; summer–autumn . . . . . ***Hyphodiscus ucrainicus***
On other substrates 14

14. Colouring the substrate red. Fruitbody 0,3-0,7 mm wide, sessile; hymenium flat, buffish to greyish to pale brown to dark brown; asci I- to IKIrb (red, blue after pretreatment), 35-50 x 5-7 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 4-8 x 1,5-2,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs 15-40 µm long, hyaline to pale yellow; known from wood, corticiaceous fungi (*Basidioradulum* and *Peniophora*) and polypores (*Piptoporus* and *Trametes*); rather rare; all year round . . . . . ***Hyphodiscus hymeniophilus***
Not colouring the substrate red 15





15. Spores globose (Qav. 1-1,15). Fruitbody 0,2-0,6 mm wide, sessile; hymenium depressed to flat, pale to dark brown; asci IKIrb (red, blue after pretreatment), 45-58 x 4,5-6,5 µm, 8-spored, with croziers; spores 2,6-3,3 x 2,5-3 µm, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical to club-shaped; marginal hairs 25-40 µm long, hyaline to pale brown; known from deciduous wood or on species of *Peniophora* growing there; rare or overlooked; all year round . . . . . ***Hyphodiscus theiodeus***
Spores more oblong 16

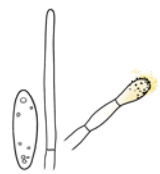




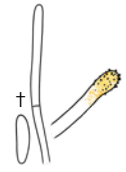
16. Spores on average longer than 7,5 µm 17
Spores on average shorter than 7,5 µm 18

17. Apical apparatus I-; on deciduous wood and fruitbodies of *Stereum*. Fruitbody 0,3-0,6 mm wide, sessile; hymenium depressed, greyish to dark brown; margin, flank or flesh with greenish colours; asci 35-45 x 5-6 µm, 8-spored, with croziers; spores ellipsoid to drop-shaped, 7,5-11,5 x 2,6-4 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs 30-60 µm long, hyaline to pale greenish brown; rare or overlooked; autumn–winter . . . . . ***Hyphodiscus stereicola → "Parahyphodiscus"*** [11]
Apical apparatus red in lugol (IKIrb); on coniferous wood. Fruitbody 0,1-0,3 mm wide, sessile; hymenium depressed to flat, yellowish to buffish to pale brown; never with greenish colours; asci 50-65 x 5-6 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 7-10,5 x 2,5-3,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical to club-shaped; marginal hairs 12-20 µm long, hyaline; rare or overlooked; winter–spring . . . . . ***Hyphodiscus pinastri***



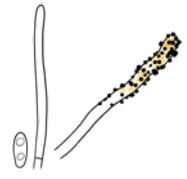


18. Spore Qav. higher than 3; hairs deep violaceous in KOH. Fruitbody 0,2-0,3 mm widee, sessile; hymenium depressed to flat, buffish, pale brown to dark brown; asci IKIrr (red before and after pretreatment), 35-45 x 4-5 µm, 8-spored, with croziers; spores drop-, spindle- to bend-spindle-shaped, 4-6,5 x 1-1,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs 30-50 µm long, pale brownish; known from coniferous wood; rare or overlooked; summer–autumn . . . . . ***Hyphodiscus auricolor***
Spore Qav. lower than 3; hairs not violaceous in KOH 19





19. Apical apparatus blue in Lugol (IKIbb); margin and outer side often with greenish-blue colours. Fruitbody 0,1-0,4 mm widee, with a short stem; hymenium depressed to flat, whitish to buffish to pale brown; asci 25-35 x 3,5-6 µm, 8-spored, with croziers; spores spindle-shaped, 3-4 x 1,5-2 µm, Qav. ≈ 2, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs 30-60 µm long, hyaline to pale brown; on deciduous wood; rare or overlooked; autumn–winter–spring . . . . . ***Hyphodiscus smaragdinus***
Apical apparatus red in lugol (IKIrb); fruitbodies never greenish-blue . . 20



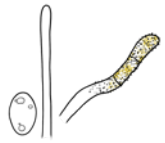


20. Flanks whitish; asci 5-8,5 µm wide. Fruitbody 0,2-0,3 mm widee, sessile; hymenium flat, hreyish to pale olive brown; asci 25-45 x 5-8,5 µm, 8-spored, with croziers; spores ellipsoid, 4-8 x 2-3,5 µm, Qav. ≈ 2,2, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs 20-35 µm long, hyaline; on wood of decuous trees and on large herbs (*Fallopia japonica*); rare or overlooked . . . . . ***Hyphodiscus hyaloscyphoides***
Flanks buffish, greyish, yellowish to ± brown; asci 4,5-5,5 mm wide. Fruitbody 0,1-0,7 mm wide, sessile; flanks sometimes yellowish; hyme-



11. The species belong in Cordieritidaceae and should be transferred to a new genus. It is described from decaying fruitbodies of *Stereum ostrea* and *S. subtomentosum*, but other records are from decidous wood. It is unclear whether an undescribed species is concealed here.

nium depressed to flat; asci 30-45 x 4,5-5,5 µm, 8-spored, with croziers; spores spindle-shaped, 3-6 x 2-3 µm, Qav. ≈ 1,8, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs 15-35 µm long, hyaline to pale yellow; on wood of coniferous and deciduous trees; rare or overlooked; all year round ..... ***Hyphodiscus otanii***



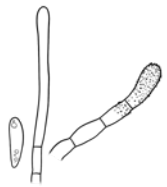
. . . .

22. On parts of coniferous trees 23
Substrate different 25

23. On conifer needles 24
On wood 25

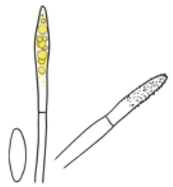


25. On green needles of *Juniperus*. Fruitbody 0,1-0,5 mm wide, sometimes with a short stem; hymenium depressed, greyish; asci I+, 35-40 x 5,5-7,5 µm, 8-spored; spores drop-shaped, 7-9 x 2-2 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs 40-70 µm long, hyaline to brown, warty; summer; rare or overlooked ..... ***Fuscolachnum borealis***
On needles of other conifers. Fruitbody 0,2-0,6 mm wide, with a short stem; hymenium depressed to flat, hyaline to whitish; asci IKI+ (blue), 25-50 x 5-5,5 µm, 8-spored, with croziers; spores , 4,5-8 x 1,2-2,5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs 20-45 µm long, hyaline; known from dead needles of *Abies, Juniperus, Picea, Pinus* and *Tsuga*; rare or overlooked; summer–autumn–winter ..... ***Cistella acuum***
On wood 24





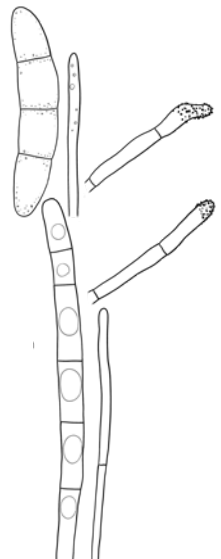
24. Fruitbodies yellowish; some paraphyses lance-shaped and with yellow contents. Fruitbody 0,4-0,8 mm wide, sessile; hymenium depressed to flat; asci IKIrb (red, blue after pretreatment), 35-45 x 5,5-7 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 5,5-8 x 2-2,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 3%; marginal hairs 25-50 µm long, hyaline; known from wood of *Picea* and *Larix*; rare or overlooked; summer–autumn–winter ..... ***Cistella improvisa***
Fruitbodies whitish; paraphyses cylindrical and hyaline. Fruitbody 0,3-0,6 mm wide, sessile; hymenium depressed to flat; asci I+, 30-40 x 5,5-6 µm, 8-spored, croziers?; spores spindle-shaped, 6-8 x 1,2-2,2 µm, Qav. ≈ 4, smooth, 1-celled, oil contents probably ≈ 0%; paraphysis tips cylindrical; marginal hairs 20-30 µm long, hyaline; known from cones of *Picea abies*; rare or overlooked ..... ***Cistella conorum***





25. Mature spores 4-8-celled, on average longer than 20 µm 26
Mature spores 1-2-celled, on average shorter than 20 µm 27

26. Mature spores 4-celled, bend-spindle-shaped, less than 30 µm long. Fruitbody 0,8-1,5 mm wide, sessile; hymenium depressed to flat, buffish; asci IKI+ (blue), 85-115 x 8,5-12 µm, 8-spored, with croziers; spores 19-27,5 x 3-5,5 µm, Qav. ≈ 5,5, smooth, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs 20-55 µm long, hyaline; known from dead leaves of *Alnus* and *Populus*, and from stems and leaves of dicot herbs; rare or overlooked; summer–autumn–winter ..... ***Cistella tenuicula***
Mature spores 8-celled, thread-shaped, more than 30 µm long. Fruitbody 0,2-0,3 mm wide, sessile; hymenium depressed, whitish; asci I+, 65-80 x 8-12 µm, 8-spored, with croziers; spores 30-40 x 2,5-3 µm, Qav. ≈ 12, smooth, oil contents ?; paraphysis tips cylindrical, often branched; marginal hairs 25-40 µm long, hyaline; on grasses; rare or overlooked; spring–summer ..... ***Cistella filispora***

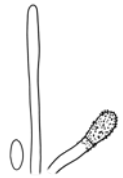


27. On wood or leaves of deciduous trees or on fungi 28
On dicot or monocot herbs 35

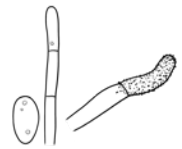
28. Spore Qav. below 2,5 29
Spore Qav. above 2,5 30

29. Spores 3-4 x 1,5-2 µm. Fruitbody 0,1-0,5 mm wide, sessile; hymenium depressed to flat, hyaline to whitish; asci I+, ca. 28 x 6 µm, 8-spored; spores ellipsoid, Qav. ≈ 2, smooth, 1-celled, oil contents ?; paraphysis tips cylindrical; marginal hairs 10-30 µm long, hyaline; known from wood of *Betula*; rare or overlooked ..... ***Cistella microspora***



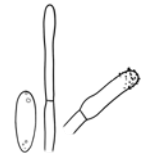


Spores 3,5-7 x 2-3 µm. Fruitbody 0,2-0,5 mm wide, with a short stem; hymenium depressed to flat, whitish, buffish, pale greyish to pale pinkish; asci IKI+ (blue), 29-45 x 5-6,5 µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 3,5-7 x 2-3 µm, Qav. ≈ 2,1, smooth, 1-celled, oil contents ≈ 25%; paraphysis tips cylindrical to club-shaped; marginal hairs 10-30 µm long, hyaline; known from wood of *Betula, Fagus, Quercus, Tilia* or on pyrenomycetes, polypores and corticioids; rare or overlooked; autumn–winter ..... ***Cistella geelmuydenii***



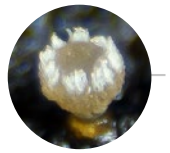


30. Apical apparatus red in lugol (IKIrb). Fruitbody 0,3-0,6 mm wide, sessile; hymenium depressed, whitish to pale orange; asci 30-50 x 5-7 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 5-9,5 x 1,5-2,5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance- to club-shaped; marginal hairs 5-50 µm long, hyaline; on wood of deciduous wood; rare or overlooked; spring ..... ***Cistella granulosella***

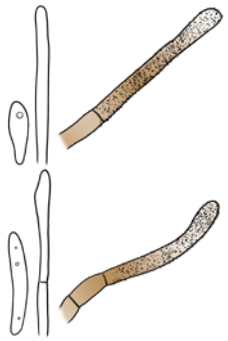


Apical apparatus I- or blue in lugol 31

31. On leaves 32
On wood 33

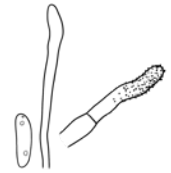


32. Spores 4-8 µm long; on *Ribes* and *Rubus*. Fruitbody 0,1-0,5 mm wide, sometimes with a short stem; hymenium depressed, buffish to greyish; asci IKI+ (blue), 45-50 x 7-8 µm, 8-spored, with croziers; spores drop-shaped, 4,5-8 x 1,5-3 µm, Qav. ≈ 2,8, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs 30-90 µm long, hyaline to brown; rare or overlooked ..... ***Fuscolachnum misellum* s.l.**
Spores 10-14 µm long; on leaves of *Ledum groenlandicum*. Fruitbody 0,1-0,3 mm wide, with a short stem; hymenium depressed, greyish; asci IKI+ (blue), 25-35 x 4-6 µm, 4-spored; spores cucumber-shaped, 10-14 x 1-1,5 µm, Qav. ≈ 9,5, smooth, 1-celled; paraphysis tips cylindrical to clavate; marginal hairs up to 60 µm long, hyaline to brown; rare or overlooked ..... ***Fuscolachnum labradoricum***



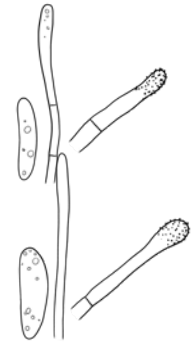


33. Spores 5,5-8 µm. Fruitbody 0,2-0,8 mm wide, sessile; hymenium depressed to flat, hyaline, whitish, cream to buff; asci I-, 35-45 x 6-8,5 µm, 8-spored, with croziers; spores cylindrical to sausage-shaped, 5,5-8 x 2-2,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips club- to lance-shaped; marginal hairs 20-30 µm long, hyaline; on wood of deciduous trees; rare or overlooked; autumn–winter ..... ***Cistella chlorosticta***



Spores longer than 8 µm 34

34. Apical apparatus I-, Fruitbody 0,2-0,6 mm wide, sessile; hymenium depressed to flat, buffish; asci I-, 45-65 x 7-9,5 µm, 8-spored, with croziers; spores cylindrical to sausage-shaped, 8-10 x 2-3 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips club-shaped; marginal hairs 15-20 µm long, hyaline; on deciduous wood, e.g. of *Pyrus*; rare or overlooked; winter ..... ***Cistella mali***

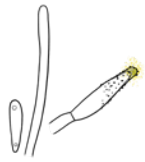




Apical apparatus blue in lugol. Fruitbody 0,2-0,8 mm wide, sessile; hymenium depressed to flat, greyish, buffish to pale brown; margin often dentate; asci IKI+ (blue), 55-80 x 5-9 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 7,5-13 x 2-3,5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips club-shaped; marginal hairs 50-70 µm long, hyaline; on deciduous wood; rare or overlooked; autumn–winter ..... ***Cistella dentata***

35. On leaves and stem of monocots . . . 36
On leaves and stems of dicot herbs or leaves and catkins of deciduous trees . . . 43

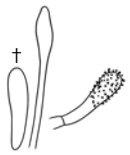
36. Tips of the hairs thick-walled and partly covered by yellowish goo. Fruitbody 0,15-0,2 mm wide, sessile; hymenium depressed to flat, hyaline to whitish; margin and flank with hairs; asci I-, 20-27 x 5-7 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 6-7 x 1,5-2 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ?; paraphysis tips cylindrical; marginal hairs 13-20 µm long, hyaline; known from dead stems and leaves of *Carex* and *Schoenoplectus lacustris*; rare or overlooked; autumn . . . ***Cistella calyptrata***



Tips of the hairs thin-walled and without yellowish goo . . . 37

37. Paraphyses tips lance-shaped, possibly intermixed with cylindrical . . . 38
Paraphyses tips cylindrical to club-shaped . . . 39

38. Hairs 15-25 µm long; on *Luzula*. Fruitbody 0,1-0,2 mm wide, sessile; hymenium depressed to flat, hyaline to whitish; asci I+, 35-65 x 6-7 µm, 8-spored; spores drop- to sausage-shaped, 7,5-11 x 1,5-2 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ ?; paraphysis; marginal hairs 15-25 µm long, hyaline; known from *Luzula spadicea*; rare or overlooked; autumn . . . ***Cistella luzulina***

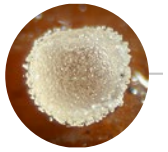




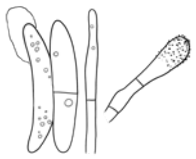
Hairs 20-55 µm long; known from *Poaceae* and *Cyperaceae*. Fruitbody 0,1-0,4 mm wide, sessile; hymenium depressed to flat, hyaline, whitish to brownish grey; asci IKI+ (blue), 35-45 x 5,5-6,5 µm, 8-spored, with croziers; spores drop-shaped, 6,5-10 x 1,5-2 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical to lance-shaped to; marginal hairs 20-55 µm long, hyaline, warty; known from *Poaceae* (e.g. *Phragmites*) and *Cyperaceae* (e.g. *Carex*); rare or overlooked; spring–summer . . . ***Cistella graminicola***



39. Asci longer than 40 µm . . . 40
Asci shorter than 40 µm . . . 41



40. Some spores more than 14,5 µm long. Fruitbody 0,2-0,4 mm wide, sessile; hymenium depressed to flat, hyaline, whitish to brownish grey; asci IKI+ (blue), 40-70 x 8-10 µm, 8-spored, with croziers; spores cucumber-, spindle- to bend-spindle-shaped, 10-22 x 2,5-3,5 µm, Qav. 5-6, smooth, 1-2-celled, oil contents ≈ 10-25%, with or without a surrounding slime coating; paraphysis tips cylindrical to club-shaped; marginal hairs 15-20 µm long, hyaline; known from dead stems to dead leaves of *Glyceria, Scirpus, Carex* and *Juncus effusus*; rare or overlooked; spring–summer . . . ***Cistella albidolutea***

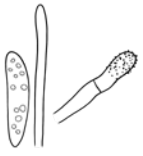


Spores 8-14,5 µm long. Fruitbody 0,1-0,5 mm wide, sessile; hymenium depressed to flat, hyaline, whitish to brownish grey; asci IKI+ (blue), 40-50 x 5-8,5 µm, 8-spored, with croziers; spores drop- to bend-spindle-shaped, 8-14,5 x 2,5-3,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical to club-shaped; marginal hairs 20-30 µm long, hyaline; known from dead stems of *Carex*; rare or overlooked; spring . . . ***Cistella caricis***

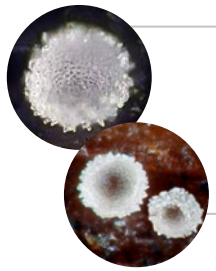




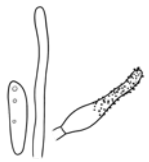
41. Spores 8-13 µm long, with ≈ 25 % oil contents; spore Qav. above 5,5. Fruitbody 0,1-0,4 mm wide, sessile; hymenium depressed to flat, hyaline, whitish to brownish grey; asci IKI+ (blue), 25-32 x 5-6 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 8-13 x 1,5-2 µm, Qav. ≈ 6, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 12-27 µm long, hyaline; known from *Typha latifolia* and *Juncus effusus*; rare or overlooked; spring–summer . . . ***Cistella typhae***



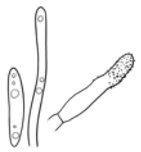
Spores 5-11 µm long, with 3-10 % oil contents; spore Oav. below 5,5 . . . 42



42. Hairs broadly bottle-shaped. Fruitbody 0,1-0,2 mm wide, sessile; hymenium depressed, hyaline to whitish; asci IKI+ (blue), 20-35 x 4,5-7,5 µm, 8-spored, with croziers; spores spindle-shaped, 5,5-11 x 1,5-2 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical; marginal hairs 10-25 µm long, hyaline to glassy; known from *Carex, Eriophorum, Dactylis* and *Calamagrostis*; rare or overlooked . . . ***Cistella lagenipilus***

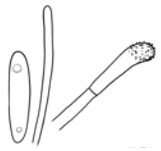


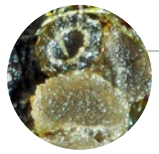
Hairs cylindrical to constricted clavate. Fruitbody 0,1-0,2 mm wide, sessile; hymenium depressed to flat, hyaline, whitish to brownish grey; asci IKI+ (blue), 18-30 x 5-6,5 µm, 4–8-spored, with croziers; spores spindle- to sausage-shaped, 5-11 x 1-2,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs 8-30 µm long, hyaline; known from grasses, *Juncus* and *Cyperaceae* (*Eriophorum* and *Carex*); rare or overlooked; spring–summer . . . ***Cistella fugiens***



43. On *Rubus* . . . 44
On other hosts . . . 45

44. On stems of *Rubus idaeus*. Fruitbody 0,2-0,5 mm wide, sessile; hymenium depressed to flat, buffish to yellowish; margin and flank with hairs; asci I+, 45-55 x 4-6 µm, 8-spored, with croziers; spores spindle-shaped, 9,5-12 x 2-3 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical; marginal hairs µm long, hyaline, warty; rare or overlooked; sommer–autumn . . . ***Cistella rubi***



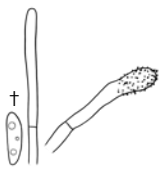


On leaves of *Rubus fruticosus*. Fruitbody 0,1-0,3 mm wide, sessile; hymenium flat to arched, buffish to pale brown; margin and flank with hairs; asci IKI+ (blue), 40-60 x 6-8 µm, 8-spored, with croziers; spores drop-shaped to spindle-shaped, 9-12 x 2-3 µm, Qav. ≈ 4, smooth, -celled, oil contents ≈ 0%; paraphysis tips cylindrical; marginal hairs 30-45 µm long, hyaline, smooth to warty; rare or overlooked; spring–summer . . . ***Mollisina oedema → Cistella***



45. On parts of deciduous trees . . . 46
On dicot herbs . . . 49

46. On *Salix* catkins. Fruitbody 0,1-0,3 mm wide, with a small stem; hymenium depressed to flat, whitish; asci I+, 25-35 x 4-5 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 5-7,5 x 1,5-2 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs 20-30 µm long, hyaline; rare or overlooked; spring . . . ***Cistella amenticola***



Ecology different . . . 47

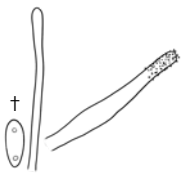


47. Hairs 30-80 µm long, often with bend tips. Fruitbody 0,1-0,3 mm wide, sessile; hymenium depressed to flat, hyaline to whitish; asci IKI+ (blue), 27-50 x 5-7,7 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 5-8 x 2-3,5 µm, Qav. ≈ 2,4, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs hyaline; known from dead leaves of *Acer, Populus* and *Ulmus*; rare or overlooked; autumn . . . ***Cistella deflexa***



Hairs up to 40 µm long, ± straight . . . 48

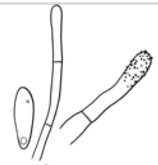
48. Spore Qav. below 3; hairs tapering. Fruitbody 0,1-0,2 mm wide, sessile; hymenium depressed to flat, hyaline to whitish; margin and flank with hairs; asci I+, 30 x 7 µm, 8-spored, croziers?; spores ellipsoid to spindle-shaped, 5-6 x 2,5-3 µm, Qav. ≈ 2, smooth, 1-celled, oil contents ≈ ?; paraphysis tips cylindrical to club-shaped; marginal hairs up to 40 µm long, hyaline; known from dead leaves of *Fagus*; rare or overlooked . . . ***Cistella atenuipilus***



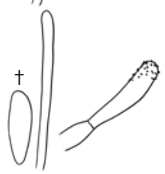


Spore Qav. above 3; hairs clavate. Fruitbody 0,15-0,7 mm wide, sessile; hymenium depressed to flat, whitish to buffish; asci IKIrb (red, blue after pretreatment), 35-55 x 4-6 µm, 8-spored, without croziers; spores drop- to spindle-shaped, 5-9 x 1,5-2,5 µm, Qav. ≈ 3,5, smooth, 1-celled,

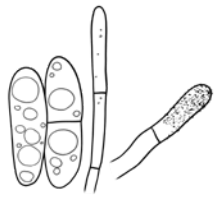
oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs 20-40 µm long, hyaline; known from dead leaves of *Acer, Fagus* and *Quercus*; autumn–winter; rare or overlooked ... ***Cistella grumosa***



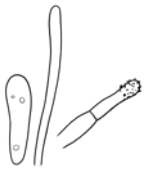
49. Fruitbody turning violet in KOH. Fruitbody 0,1-0,2 mm wide, sessile; hymenium depressed to flat, yellowish; asci I+, 35-45 x 6-65, µm, 8-spored, with croziers; spores drop-shaped, 6,5-10 x 2,5-2,5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ?; paraphysis tips cylindrical; marginal hairs up to 40 µm long, hyaline; known from dead stems and leaves of dicot herbs; rare or overlooked ... ***Cistella flavorubens***
Fruitbody not turning violet ... 50

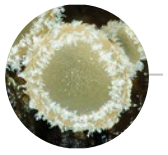


50. Hairs 6,5-8 µm wide, often reddening with age. Fruitbody 0,2-0,3 mm wide, sessile; hymenium depressed to flat, buffish, sometimes reddening; asci IKI+ (blue), 45-60 x 9-10 µm, 8-spored, with croziers; spores sausage- to bend-spindle-shaped, 9,5-15 x 3-4 µm, Qav. ≈ 3,5, smooth, 1-2-celled, oil contents ≈ 50%; paraphysis tips cylindrical; marginal hairs 40-90 x 6,5-8 µm long, hyaline; known from dead stems and leaves of dicot herbs, e.g. *Reynoutria* and *Sambucus ebulus*; autumn; rare or overlooked ... ***Cistella crassipila***
Hairs more narrow, not not reddening ... 51

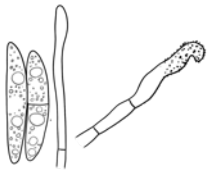


51. Spores bend drop-shaped (shoo-print-shaped), Qav. ≈ 3,5. Fruitbody 0,2-0,5 mm wide, sessile; hymenium depressed, yellowish to buffish; margin and flank with hairs; asci I- or I+, 50-60 x 6,5-7,5 µm, 8-spored, with croziers; spores 8,5-12,5 x 2,5-3,5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ?; paraphysis tips cylindrical, club- to lance-shaped; marginal hairs 30-60 (-100) µm long, hyaline; known from dead stems and leaves of dicot herbs; rare or overlooked ... ***Cistella pediformis***
Spore shape or Qav. different ... 52



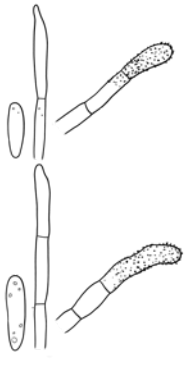


52. Spores 10-50 µm long, oil contents 50-80%. Fruitbody 0,1-0,2 mm wide, sessile; hymenium depressed to flat, whitish, buffish to pale orange brown; asci IKI+ (blue), 55-75 x 6-8 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 10-15 x 2,5-3 µm, Qav. ≈ 4,5, smooth, 1-2-celled; paraphysis tips cylindrical to lance-shaped; marginal hairs 45-60 µm long, hyaline; on dead leaves and stems dicot herbs; spring–summer–autumn; rare or overlooked ... ***Cistella aconiti* s.l.**
Spores up to 10,5 µm long, oil contents 3-10% ... 53



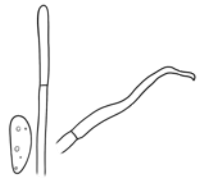


53. Spores 6-7,5 µm long. Fruitbody 0,2-0,8 mm wide, sessile; hymenium depressed to flat, whitish, brownish grey to buffish; asci IKI+ (blue), 30-40 x 3,5-5 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 6-7,5 x 1,3-2,5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical to lance-shaped; marginal hairs 20-65 µm long, hyaline; on dead leaves and stems dicot herbs; spring–summer; rare or overlooked ... ***Cistella hungarica***
Spores 7-10,5 µm long. Fruitbody 0,2-0,8 mm wide, sessile; hymenium depressed to flat, whitish, brownish grey to buffish; margin and flank with hairs; asci IKI+ (blue), 30-55 x 4,5-7 µm, 8-spored, with croziers; spores drop- to bend-spindle-shaped, 7-10,5 x 1,5-2,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical to lance-shaped; marginal hairs 14-50 µm long, hyaline; on dead leaves and stems dicot herbs; spring–summer; common ... ***Cistella grevillei***



Key H – *Hyaloscypha* and others

1. On old fruitbodies of polypores. Fruitbody 0,1-0,4 mm wide, with a short stem; hymenium depressed, whitish; asci I+, 35-55 x 4,5-6 µm, 8-spored, without croziers; spores spindle- to bend-spindle-shaped, 5,5-8 x 1,8-3 µm, Qav. ≈ 2,8, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 25-40 µm long, flagellate, hyaline, smooth; known from *Amylocystis lapponica* and *Postia* s.l. on coniferous wood; summer; rare or overlooked ... ***Hyaloscypha epiporia***
On parts of plants ... 2



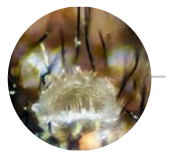
2. On wood ... 2
Habitat different ... 30



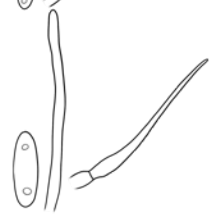
3. Fruitbodies always growing together with their black, setose *Haplographium* asexual state ... [*Dematioscypha* p.p.] ... 4
Not together with a black, setode, asexual state ... 7

4. Spores 10-15 µm long; on *Pinus*. Fruitbody 0,1-0,2 mm wide, sessile; hymenium ± flat, greyish buff; asci I+, 50-60 x 7-9 µm, 8-spored, with croziers; spores cylindrical to bend-spindle-shaped, 10-15 x 2-3 µm, Qav. ≈ 5, smooth, 1-celled, oil contents probably low; paraphysis tips cylindrical; marginal hairs 35-90 µm long, hyaline, smooth, with goo; spring; rare or overlooked ... ***Dematioscypha galanii***
Spores shorter; on deciduous wood ... 5

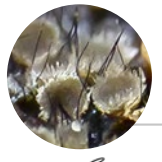




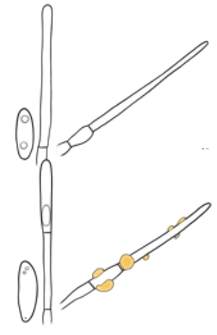
5. Hairs mostly aseptate and without goo. Fruitbody 0.2-0,4 mm wide, sessile; hymenium ± flat, greyish; asci I-, 45-55 x 7-7,5 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 5,5-10 x 2-3 µm, Qav. ≈ 3, smooth, 1-2-celled, oil contents ≈ 10%; paraphysis tips cylindrical; marginal hairs 60-80 µm long, hyaline; known from deciduous wood; all year round; rare or overlooked ... ***Dematioscypha delicata***
Hairs septate and with yellowish or reddish goo ... 6

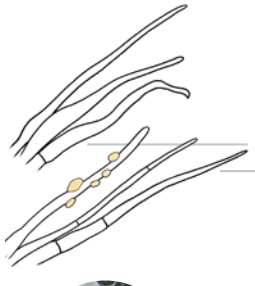


6. Hairs with reddish () colours (reddish goo); with croziers. Fruitbody 0,1-0,5 mm wide, sessile; hymenium ± flat, greyish to reddish; asci I-, 30-60 x 5-7,5 µm, 8-spored; spores spindle-shaped, 5-8 x 2-3 µm, Qav. ≈ 2,6, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical; marginal hairs up to 80 µm long, hyaline; known from deciduous wood, including *Rubus*; autumn-winter; rare or overlooked ... ***Dematioscypha richonis***



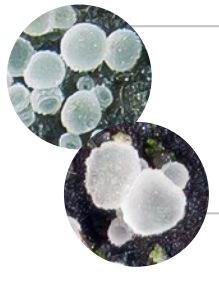
Hairs not reddish; without croziers. Fruitbody 0,3-0,8 mm wide, sessile; hymenium ± flat, olivaceous buff; asci I-, 35-45 x 6-7 µm, 8-spored; spores spindle-shaped to bend-spindle-shaped, 5-9 x 2-3 µm, Qav. ≈ 2,8, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical; marginal hairs 50-90 µm long, hyaline; known from deciduous wood; all year round; rare or overlooked ... ***Dematioscypha olivacea***



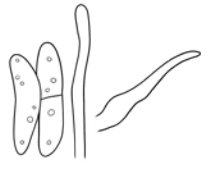


7. Hairs tapering to flagellate, aseptate ... [*Hyaloscypha* p.p.] ... 8
Hairs club-shaped, cylindrical to somewhat tapering, *if* strongly tapering *then* septate ... 17

8. Apical apparatus I- ... 9
Apical apparatus I+ (blue) ... 10



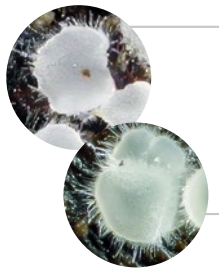
9. Spores 8-17 µm long, often 2-celled. Fruitbody 0,1-0,5 mm wide, sometimes with a short stem; hymenium depressed to flat, hyaline to whitish; asci 40-85 x 7-10 µm, 8-spored, without croziers; spores spindle- to bend-spindle-shaped, 8-17 x 2,5-4,5 µm, Qav. ≈ 3,5, smooth, 1-2-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs 20-40 µm long, hyaline, smooth; known from wood of *Carpinus* and *Salix*; summer–autumn; rare or overlooked ... ***Hyaloscypha intacta***
Spores 7-11 µm long, 1-celled. Fruitbody 0,1-0,4 mm wide, sometimes with a short stem; hymenium depressed to flat, hyaline to whitish; asci 30-55 x 5,5-9 µm, 8-spored, without croziers; spores drop-, spindle- to bend-



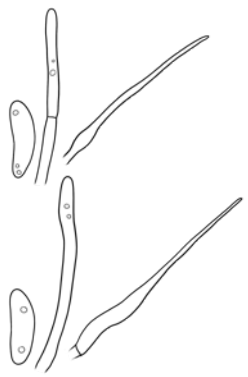
spindle-shaped, 7-11 x 2-3 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical; marginal hairs 20-40 µm long, hyaline, smooth; on various deciduous; summer–autumn; rare or overlooked . . . ***Hyaloscypha quercicola***



10. Some hairs more that 70 µm long . . . 11
Hairs shorter . . . 12



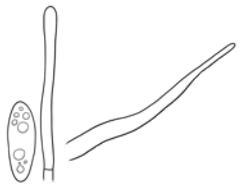
11. With croziers. Fruitbody 0,1-0,8 mm wide, sometimes with a short stem; hymenium depressed to flat, hyaline to whitish; asci IKI+ (blue), 35-50 x 5,5-7 µm, 8-spored; spores ellipsoid to sausage-shaped, 6-11,5 x 1,5-2,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical; marginal hairs 45-250 µm long, hyaline, smooth; known from wood of coniferous and deciduous trees; spring–summer–autumn; rare or overlooked . . . ***Hyaloscypha bulbopilosa***
Without croziers. Fruitbody 0,1-0,5 mm wide, sometimes with a short stem; hymenium depressed to flat, hyaline to whitish; asci IKI+ (blue), 20-70 x 4,5-9 µm, 8-spored; spores ellipsoid, drop- to spindle-shaped, 5,6-11 x 1,7-3,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs 50-250 µm long, hyaline, smooth; known from wood of deciduous or rarely coniferous trees; summer-autumn-winter; rare or overlooked . . . ***Hyaloscypha leuconica***





12. Without croziers . . . 13
With croziers . . . 14

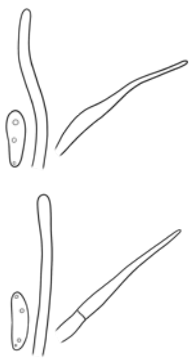
13. Spores on average shorter than 10 µm. Fruitbody 0,2-0,5 mm wide, sometimes with a short stem; hymenium depressed to flat, hyaline to whitish; asci IKI+ (blue), 40-80 x 6,5-10 µm, 8-spored, without croziers; spores ellipsoid, drop- to sausage-shaped, 7-11 x 2,5-3,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs 25-70 µm long, sometimes sinuose, hyaline, smooth or with goo; known from wood of deciduous and coniferous wood; all year round; rare or overlooked . . . ***Hyaloscypha leucostigma***[12]
Spores on averange longer than 10 µm. . . . see *Hyaloscyhpa herbarum*, cpl. xx



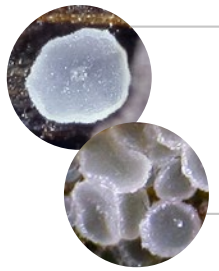
14. Spores on average shorter than 8 µm . . . 15
Spores on averange longer than 8 µm . . . 16



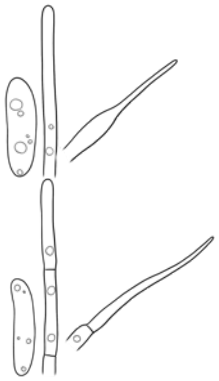
15. Most spores drop-shaped. Fruitbody 0,1-0,7 mm wide, sometimes with a short stem; hymenium depressed to flat, hyaline to whitish; asci IKI+ (blue), 35-55 x 5-7,5 µm, 8-spored; spores 5-9 x 1,8-3 µm, Qav. ≈ 2,9, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs 20-35 µm long, hyaline, smooth; known from wood of *Quercus*; summer–autumn; rare or overlooked . . . ***Hyaloscypha daedaleae***
Most spores spindle- to bend-spindle-shaped. Fruitbody 0,1-0,7 mm wide, sometimes with a short stem; hymenium depressed to flat, hyaline to whitish; asci IKI+ (blue), 25-45 x 4,5-6,5 µm, 8-spored, with croziers; spores 5,5-8,5 x 2-2,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs 30-60 µm long, hyaline, smooth; known from wood of deciduous or rarely coniferous; mostly spring-summer; rare or overlooked . . . ***Hyaloscypha fuckelii***



12. It is unclear whether this taxon can be separated from the later *Hyaloscypha priapi* Velen.

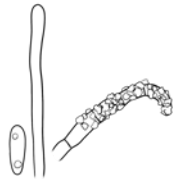


16. Hairs smooth. Fruitbody 0,1-0,6 mm wide, sometimes with a short stem; hymenium depressed to flat, hyaline to whitish; asci IKI+ (blue), 40-75 x 7-10,5 µm, 8-spored; spores spindle- to bend-spindle-shaped, 7,5-15 x 2,5-4 µm, Qav. ≈ 3,5, smooth, 1-2-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical; marginal hairs 30-60 µm long, hyaline; known from wood of deciduous trees; spring–summer–autumn; rare or overlooked . . . ***Hyaloscypha vitreola***
Hairs with some warts or goo. Fruitbody 0,1-0,8 mm wide, sometimes with a short stem; hymenium depressed to flat, hyaline to whitish; asci IKI+ (blue), 35-65 x 6-9 µm, 8-spored; spores sausage- to bend-spindle-shaped, 8,5-14,5 x 2,5-4 µm, Qav. ≈ 3,6, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical; marginal hairs 30-50 µm long, hyaline; known from wood of coniferous and deciduous trees; mostly summer-autumn; rare or overlooked . . . ***Hyaloscypha albohyalina***

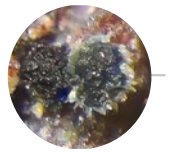


17. With heavily encrusted hairs . . . 18
With smooth hairs, possibly with goo . . . 19

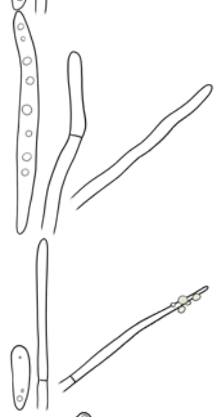
18. Spores 5-6 µm long; hairs 30-50 µm long. Fruitbody 0,15-0,6 mm wide, sometimes with a short stem; hymenium depressed, whitish; asci IKI+ (blue), 20-35 x 4,5-5,5 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 5-6 x 1,5-2 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs 30-50 µm long, hyaline to pale yellow; known from wood of coniferous trees (e.g. *Abies, Picea* and *Pinus*); autumn-winter; rare or overlooked . . . ***Incrupila dennisii***



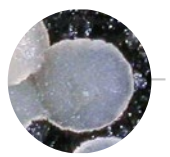
Spores 5,5-8 µm long; hairs 60-150 µm long. Fruitbody 0,1-0,3 mm wide, sometimes with a short stem; hymenium depressed, whitish to greyish buff; asci I+, 40-45 x 4-5,5 µm, 8-spored, with croziers; spores ellipsoid, drop-shaped to spindle-shaped, 5,5-8 x 1,5-2 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical; marginal hairs 60-150 µm long, hyaline; known from deciduous wood; autumn-winter; rare or overlooked . . . ***Incrupila lignicola***



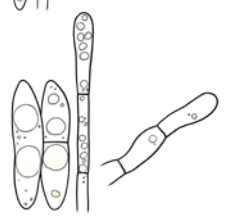
29. Spore Qav. above 8. Fruitbody 0,1-0,3 mm wide, sessile; hymenium flat, greyish to blackish; asci IKI?, 50 x 8 µm, 8-spored; spores spindle-shaped, 27-27 x 2-2,5 µm, Qav. ≈ 12, smooth, 1-4-celled, oil contents ≈ 0%; paraphysis tips cylindrical; marginal hairs -50 µm long, hyaline, thick-walled, smooth; known from wood of *Pinus*; winter-spring; rare or overlooked . . . ***Cyanoskyttea pinicola* nom. prov.**
Spore Qav. lower . . . 20



20. Without croziers. Fruitbody 0,1-0,5 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue), 35-50 x 4-5 µm, 8-spored; spores ellipsoid, sausage-shaped, spindle-shaped to bend-spindle-shaped, 5,5-8 x 1,8-2,2 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical; marginal hairs 55-125 µm long, hyaline, often with goo; known from wood of *Betula*; summer; rare or overlooked . . . ***Eupezizella candida***
With croziers . . . 21



21. Hairs clavate,10-20 µm long. Fruitbody 0,2-0,6 mm wide, sessile; hymenium flat to arched, hyaline to greyish-white; asci IKI+ (blue), 65-80 x 9-11 µm, 8-spored, with croziers; spores spindle-shaped, 9-16 x 3-4 µm, Qav. ≈ 3,5, smooth, 1-2-celled, oil contents ≈ 50%; paraphysis tips club-shaped; marginal hairs hyaline, smooth; known from wood of *Populus*; winter; rare or overlooked . . . ***Pachydisca ascophanoides***
Hairs cylindrical to tapering, longer . . . 22



22. Apical apparatus I- . . . 23
Apical apparatus I+ . . . 24

23. Spores 8-14 µm long; hair reddish (). Fruitbody 0,1-0,3 mm wide, sessile; hymenium depressed to flat, whitish; asci 46-65 x 6-8 µm, 8-spored; spores spindle- to bend-spindle-shaped, 8-14 x 3-3,5 µm, Qav. ≈ 3,5, smooth, 1-2-celled, oil contents ?; paraphysis tips cylindrical; marginal hairs 40-90 µm long, hyaline, with reddish goo; on coniferous wood; arctic summer; rare or overlooked ***Eupezizella roseoguttata***



Spores shorter; hairs white or slightly greenish (). Fruitbody 0,2-0,5 mm wide, sessile; hymenium depressed to flat, brownish; asci I-, 35-43 x 3,5-5,5 µm, 8-spored; spores cylindrical, sausage- to bend-spindle-shaped, 4,5-8 x 1,5-2,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs up to 100 µm long, hyaline, with goo; known from wood of coniferous and deciduous trees; autumn-winter; rare or overlooked ***Parahyphodiscus viridula* nom. prov. (DMS-10547920)**



24. Hymenium buffish (). Fruitbody 0,1-0,5 mm wide, sessile; hymenium depressed to flat, buffish to pale brown; asci I+, 25-35 x 4-6 µm, 8-spored; spores drop- to spindle-shaped, 4-8 x 1,8-2 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs up to 125 µm long, hyaline, smooth, containing cyanophilus blotches; on coniferous and deciduous wood, e.g. *Abies, Betula, Fagus* and *Fraxinus*; summer-autumn; rare or overlooked ***Resinoscypha variepilosa***

Hymenium hyaline, whitish to greyish () 25

25. On deciduous wood 26
On coniferous wood 27



26. Spores 8-12 µm long. Fruitbody 0,5-1,5 mm wide, sessile; hymenium depressed to flat, whitish; asci IKIrb (red, blue after pretreatment), 60-85 x 6,5-10 µm, 8-spored; spores drop- to spindle-shaped, 8-12 x 2,5-4 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical; marginal hairs 40-60 µm long, hyaline, smooth; known from wood of *Alnus* and *Populus*; spring; rare or overlooked ***Psilocistella vernalis***

Spores 3,5-5 µm long. Fruitbody 0,1-0,2 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue), 20-30 x 3,5-5 µm, 8-spored; spores cylindrical to drop-shaped, 3,5-5 x 1-2 µm, Qav. ≈ 2,8, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to club-shaped; marginal hairs 25-40 µm long, hyaline, smooth; on decidupud wood, e.g. of *Fagus sylvatica*; autumn; rare or overlooked ***Psilocistella obselata***

27. Hairs with lumps of brownish to yellowish goo 28
Hairs whitish 29



28. Spores on average shorter than 8 µm. Fruitbody 0,2-1,5 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue), 35-63 x 5-8,5 µm, 8-spored; spores spindle- to bend-spindle-shaped, 6,5-10,5 x 2-3,5 µm, Qav. ≈ 3,3, smooth, 1-celled, oil contents ≈ 0-10%; paraphysis tips cylindrical; marginal hairs 25-60 (-110) µm long, hyaline to pale yellow, with yellowish goo; on coniferous wood; autumn–winter–spring; common ***Eupezizella aureliella***

Spores on average longer that 8 µm. Fruitbody 0,1-0,5 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue), 42-70 x 5-8 µm, 8-spored; spores spindle- to bend-spindle-shaped, 7-13,5 x 2-3,5 µm, Qav. ≈ 3,5, smooth, 1-1-2-celled, oil contents ≈ 10-25%; paraphysis tips cylindrical; marginal hairs 30-100 (-150) µm long, hyaline, with yellowish or brownish goo; coniferous wood, e.g. of *Larix* and *Picea*; all year round; rare or overlooked ***Eupezizella britannica***

29. Flesh with amyloid inclusions. Fruitbody 0,2-0,5 mm wide, sessile; hymenium depressed, whitish; asci IKI+ (blue), 40-55 x 4-8 µm, 8-spored; spores ellipsoid, cylindrical, sausage-shaped to bend-spindle-shaped, 7-12,5 x 2-3 µm, Qav. ≈ 4, smooth, 1-2-celled, oil contents ≈ 3%; paraphysis tips cylindrical to club-shaped; marginal hairs up to 150 µm long, hyaline, smooth; on coniferous wood including wood-chips; summer–autumn; rare or overlooked ***Mimicoscypha lacrimiformis***

Flesh without amyloid inclusions. Fruitbody 0,3-1 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue), 40-55 x 5-7 µm, 8-spored; spores cylindrical, spindle- to bend-spindle-shaped, 8,5-13,5 x 2-3 µm, Qav. ≈ 4,5, smooth, 1-2-celled, oil contents ≈ 0-10%; paraphysis tips cylindrical; marginal hairs 30-150 µm long, hyaline, smooth; on coniferous wood; spring–summer; rare or overlooked ***Resinoscypha monoseptata***

30. On conifer needles 31
On other substrates 32

31. Hairs 20-50 µm long. Fruitbody 0,1-0,2 mm wide, with a small stem; hymenium depressed, whitish to greyish; asci I-, 30-45 x 5-6,5 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 6-9 x 1,5-2 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical; marginal hairs hyaline to pale brown, smooth; on needles of *Pinus*; summer; rare or overlooked ***Hyaloscypha acicularum***



Hairs 100-250 µm long. Fruitbody 0,1-0,5 mm wide, with a small stem; hymenium depressed, buffish to pale brown; asci I-, 30-40 x 3,5-4 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 4,5-9 x 1,5-2,5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips cylindrical; marginal hairs hyaline to pale brown, thick-walled, smooth; on needles of *Pinus*; autumn; rare or overlooked ***Hyalopeziza trichodea***

32. On mosses or ferns 33
On stems and leaves of parts of mono- and dicot herbs and trees 36

33. On mosses 34
On ferns 35

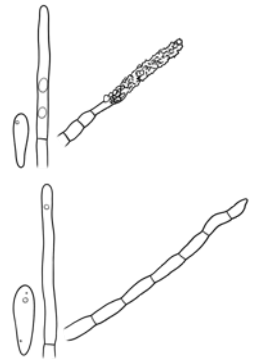
34. Fruitbodies white; known from *Calypogeia, Cephalozia* and *Tetraphis*. Fruitbody 0,2-0,7 mm wide, sesslie or with a small stem; hymenium depressed to flat; asci IKI+ (blue) or slightly IKIrb (red, blue after pretreatment), 60-80 x 6,5-8 µm, 8-spored, without croziers; spores drop- to spindle-shaped, 6,5-9,5 x 3-3,5 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 10-50%; paraphysis tips cylindrical; marginal hairs 30-40 µm long, hyaline, smooth; autumn–winter–spring; rare or overlooked ***Hyaloscypha albocarpa***

Fruitbodies greyish brown; known from *Cephaloziella, Lophozia* and *Ptilidium*. Fruitbody 0,2-0,8 mm wide, with a small stem; hymenium depressed, greyish; asci IKI+ (blue), 45-110 x 6,5-11,5 µm, 8-spored, without croziers; spores drop- to spindle-shaped, 7-11 x 3-4 µm, Qav. ≈ 2,6, smooth, 1-celled, oil contents ≈ 3-50%; paraphysis tips cylindrical; marginal hairs 20-50 µm long, hyaline, smooth; all year round; rare or overlooked ***Hyaloscypha hepaticola***



35. Hairs strongly encrusted; apical apparatus red in lugol (IKIrb); known from *Aspidium, Dryopteris* and *Polystichum*. Fruitbody 0,1-0,3 mm wide, sessile; hymenium depressed, whitish; asci 20-35 x 3-5,5 µm, 8-spored, with croziers; spores drop-shaped, 5-8 x 1-2 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs 30-50 µm long, hyaline; spring–summer; rare or overlooked ***Incrupila aspidii***

Hairs ± smooth; apical apparatus blue in lugol (IKIbb); known from *Pteridium* and *Matteuccia*. Fruitbody 0,2-0,3 mm wide, sessile; hymenium depressed, greyish to hyaline; asci IKI+ (blue), 24-33 x 5-8 µm, 8-spored, with croziers; spores ellipsoid, drop-shaped to bend-spindle-shaped, 6,5-9,5 x 1,5-2 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs 50 µm long, hyaline; spring–summer; rare or overlooked ***Microscypha arenula***



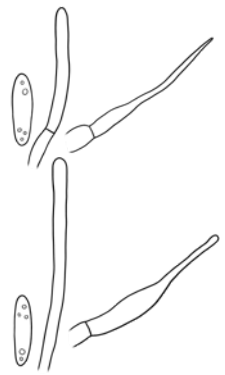
36. On monocots ... 37
On dicots ... 40



37. Hairs 20-55 µm long ... 38
Hairs 40-150 µm long ... 39

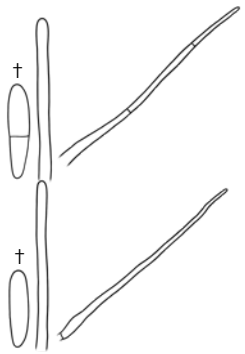
38. With croziers; hairs gradually tapering. Fruitbody 0,1-0,4 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue), 40-50 x 4,5-6 µm, 8-spored; spores spindle-shaped, cylindrical to sausage-shaped, 7-10,5 x 1-2 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs 20-55 µm long, hyaline, smooth; known from dead stems of *Secale cereale*; summer-autumn; rare or overlooked ***Hyaloscypha secalina* var. *secalina***

Without croziers; hairs bottle-shaped. Fruitbody 0,1-0,4 mm wide, sessile; hymenium depressed to flat, whitish; asci IKI+ (blue), 20-50 x 3,5-5 µm, 8-spored; spores drop-, spindle- to bend-spindle-shaped, 5,5-10,5 x 1-1,7 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical; marginal hairs 20-35 µm long, hyaline, smooth; known from dead stems andd leaves of mono- and dicot herbs (e.g. *Potententilla palustris* and *Eriophorum*); sommer-autumn; rare or overlooked ***Hyaloscypha secalina* var. *paludicola***



39. With croziers. Fruitbody 0,2-0,5 mm wide, with a short stem; hymenium depressed, whitish; asci IKI+ (blue), 70-85 x 5-6 µm, 8-spored; spores spindle- to bend-spindle-shaped, 8,5-14 x 2-3 µm, Qav. ≈ 4,5, smooth, 1-2-celled, oil contents ≈ 3%; paraphysis tips cylindrical; marginal hairs 40-150 µm long, thick-walled, hyaline, smooth; known from dead stems and leaves of *Cyperaceae* and *Juncus*; spring–summer; rare or overlooked ***Mimicoscypha mimica***

Without croziers. Fruitbody 0,2-0,4 mm wide, with a short stem; hymenium depressed, whitish; asci IKIbb, 40-60 x 4-6 µm, 8-spored; spores ellipsoid to cylindrical, 7,5-10 x 1,9-2,2 µm, Qav. ≈ 4,5, smooth, 1-2-celled; paraphysis tips cylindrical; marginal hairs 60-130 µm long, hyaline, smooth; known from herbaceous debris in bogs; summer–autumn; rare or overlooked ***Mimicoscypha paludosa***

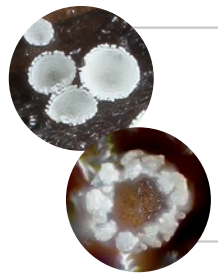


40. On leaves and stems of herbs ... 41
On leaves of deciduous trees and *Rubus* ... 43

41. Hairs 60-130 µm long ... see *Mimicoscypha paludosa*, cpl. xx
Hairs 20-60 µm long ... 42

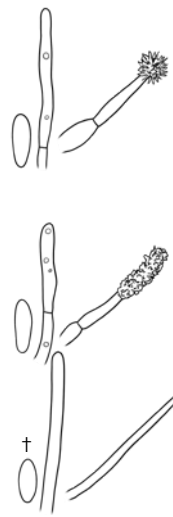
42. Asci with croziers; hymenium pale grown ... see *Hyalopeziza niveocincta* Gxx
Asci without croziers; hymenium whitish ... see *Hyaloscypha secalina* var. *paludicola*, cpl. xx

43. Hairs with large apical crystals ... 44
Hairs smooth or with schattered goo ... 45



44. Asci with croziers. Fruitbody 0,1-0,5 mm wide, sessile; hymenium depressed to flat, buffish to pale brown; asci possibly IKIrb (red, blue after pretreatment), 25-35 x 4-6 µm, 8-spored; spores spindle- to bend-spindle-shaped, 4-6,5 x 1,8-2,2 µm, Qav. ≈ 2,6, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical; marginal hairs 15-30 µm long, hyaline, with apical crystals; known from dead leaves of *Castanea sativa*, *Quercus robur* and *Q. rubra*; winter; rare or overlooked ***Graddonidiscus vandae***

Asci without croziers. Fruitbody 0,1-0,2 mm wide, sessile; hymenium depressed to flat, buffish to pale browns; asci IKI+ (blue), 25-35 x 5-6,5 µm, 8-spored; spores spindle- to bend-spindle-shaped, 5,5-7,5 x 2-3 µm, Qav. ≈ 2,6, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical; marginal hairs 10-20 µm long, hyaline, with apical crystals; known from dead leaves of *Quercus pubescens* and *Q. ilex*; autumn-winter-spring; rare or overlooked ***Graddonidiscus hispanicus***



45. Hairs 100-250 µm long. Fruitbody 0,3-0,3 mm wide, sessile; hymenium flat to arched, whitish; asci I+, ca. 40 x 5 µm, 8-spored; spores ellipsoid, ca. 5 x 2 µm, Qav. ≈ 2,5, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs hyaline, thick-walled, smooth; known from fruit spines of *Castanea sativa*; autumn; rare or overlooked ***Hyalopeziza spinicola***
Hairs shorter ... 46

46. On dead leaves of *Ilex aquifolium*. Fruitbody up to 0,5 mm wide, sessile; hymenium depressed to flat, pale greyish to hyaline; asci I+, (†) 40-45 x 4-5 µm, 8-spored; spores spindle-shaped, (†) 6-9 x 2-2 µm, Qav. ≈ 4, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs up to 60 µm long, hyaline, smooth; winter; rare or overlooked ***Microscypha enrhizus***
On other hosts ... 47

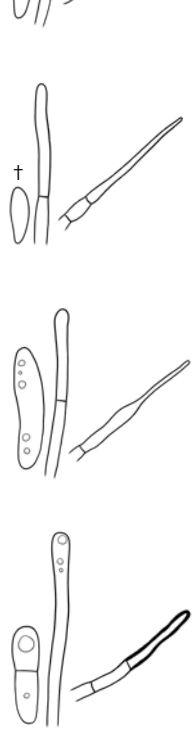


47. Spores 5,5-7 µm long; with a short, dark stem. Fruitbody 0,2-0,2 mm wide; hymenium depressed, buffish to greyish; asci IKI+ (blue), 35-45 x 5,5-6 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 5,5-7 x 1,8-2,3 µm, Qav. ≈ 3, smooth, 1-celled; paraphysis tips cylindrical; marginal hairs 30-40 µm long, hyaline to pale brown at the base, smooth; known from dead leaves of deciduous trees, e.g. *Carpinus* and *Castanea*; autumn; rare or overlooked ***Hyaloscypha fuscostipitata***
Spores longer; without such stem ... 48

48. Hairs flagellate. Fruitbody 0,1-0,5 mm wide, sessile; hymenium depressed to flat, whitish; asci I+, 39-60 x 6-8,4 µm, 8-spored, without croziers; spores spindle- to bend-spindle-shaped, 9-17,5 x 2-3,5 µm, Qav. ≈ 5, smooth, 1-2-celled, oil contents ≈ 10-25%; paraphysis tips cylindrical to club-shaped; marginal hairs 18-40 µm long, hyaline, smooth; known from wood, cones, litter, and stems of dicot herbs; all year round; rare or overlooked ***Hyaloscypha herbarum***
Hairs slightly tapering, cylindrical to clavate ... 49



49. On leaves of *Rubus fruticosus*; with croziers ... see *Mollisina oedema*, Gxx
On leaves of *Dryas octopetala*; without croziers. Fruitbody 0,15-0,2 mm wide, sessile; hymenium depressed to flat, pale brown; asci I+, possibly IKIrb (red, blue after pretreatment), 35-45 x 5-8 µm, 8-spored, without croziers; spores drop-shaped to cylindrical, often constricted, 9,5-13,5 x 2,5-3 µm, Qav. ≈ 1,7, smooth, 1-2-celled, oil contents ≈ 10-25%; paraphysis tips cylindrical; marginal hairs up to 30 µm long, thick-walled, hyaline, smooth; summer; rare or overlooked ***Grahamiella dryadis***





Key I – discs with coloured, brownish or blackish hairs (e.g. *Brunnipila, Lasiobelonium, Perrotia* and *Trichopeziza*)

1. Hair tips with large, bi-pyramidical crystals (may loosen and float in freely the preparation); hairs rather stout and with many septa ..... [*Brunnipila*] .. 2
   Hair tips without large crystals; hairs stout or slender, with or without many septa 10

Overview of hosts of *Brunnipila* species

Acer	*Brunnipila fuscescens* (leaves), *B. calyculiformis* (on wood)
Alnus	*Brunnipila fuscescens* (leaves), *B. calyculiformis* (on wood)
Arctium	*Brunnipila clandestina*
Carpinus	*Brunnipila fuscescens*
Cirsium	*Brunnipila clandestina*
Corylus	*Brunnipila calyculiformis* (on wood)
Dryas	*Brunnipila dryadis*
Epilobium	*Brunnipila clandestina*
Erica	*Lachnum* [*Brunnipila*] *latebricola* (on wood)
Fagus	*Brunnipila fuscescens* (leaves), *B. calyculiformis* (on wood)
Juncus	*Brunnipila calycioides*
Ledum	*Brunnipila dumorum*
Quercus	*Brunnipila brunneola*
Rhododendron	*Lachnum* [*Brunnipila*] *latebricola* (on wood)
Rubus fruticosus	*Brunnipila dumorum*
Rubus idaeus	*Brunnipila clandestina*
Sorbus	*Brunnipila calyculiformis* (on wood)
Triticum aestivum	*Brunnipila palearum*

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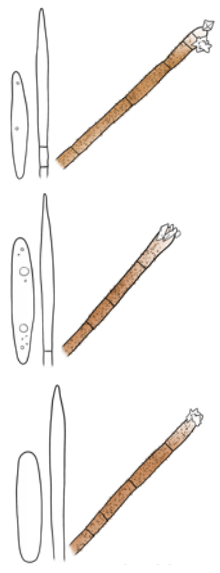
2. On monocots 3
   On dicots 4

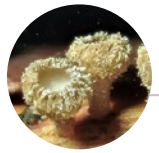


3. On grasses; apical apparatus blue in lugol (IKIbb). Fruitbody 0,3-1,5 x 0,5-1,5 mm, with a hairy stem; hymenium depressed to flat, buffish; asci 65-75 x 5,5-6,5 µm, 8-spored, without croziers; spores spindle-shaped, 9-18 x 2-3 µm, Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding 15-25 µm above the asci; marginal hairs 90-120 µm long, pale brown to brown, encrusted; rare or overlooked ..... ***Brunnipila palearum***
   On *Juncus*; apical apparatus red in lugol (IKIrr). Fruitbody 0,3-1 x 0,5-1,5 mm, with a hairy stem; hymenium flat, buffish; asci 60-80 x 5-7 µm, 8-spored, without croziers; spores spindle-shaped, 11-17 x 2-3 µm, Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 0-10%; paraphysis tips lance-shaped, protruding 20-30 µm above the asci; marginal hairs 60-100 µm long, pale brown to brown, encrusted; known from dead stems of *Juncus effusus*; rare or overlooked ..... ***Brunnipila calycioides***

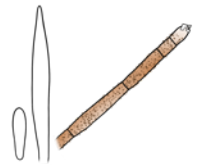


4. On leaves of Dryas; spores 10-15,5 x 2,5-4 µm. Fruitbody 0,2-0,5 x 0,3-0,5 mm, with a hairy stem; hymenium flat, buffish; asci IKI+ (blue), 55-65 x 7,5-9 µm, 4-8-spored, without croziers; spores spindle- to drop-shaped, 10-15,5 x 2,5-4 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding 5-10 µm above the asci; marginal hairs 100-130 µm long, pale brown to brown, encrusted; rare or overlooked ..... ***Brunnipila dryadis***
   On other hosts; spores mostly smaller 5

5. On stems and leaves of herbs (including *Rubus*); without croziers .. 6
   On branches and leaves of woody hosts (including *Erica*); with croziers 7



6. On leaves of *Rubus fruticosus*; fruitbodies less than 1 mm wide; hairs shorter than 100 µm. Fruitbody with a hairy stem; hymenium flat, buffish; asci IKI+ (blue), 55-65 x 7,5-9 µm, 8-spored; spores spindle- to drop-shaped, 4-8 x 1,2-2,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding above the asci; marginal hairs 70-100 µm long, pale brown to brown, encrusted; rare or overlooked ..... ***Brunnipila dumorum***

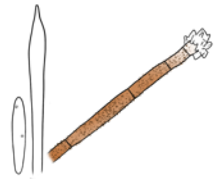


   On stems of *Rubus idaeus* and various larger herbs; fruidbodies mostly more than 1 mm wide; hairs u to 170 mm long. Fruitbody with a hairy stem; hymenium depressed to flat, buffish; asci IKI+ (blue), 40-60 x 4,5-5 µm, 8-spored; spores spindle-shaped, 6-11 x 1,2-2,2 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 20-30 µm above the asci; marginal hairs 75-170 µm long, pale brown to brown, encrusted; known from stems of *Rubus idaeus*, *Epilobium*, *Arctium* and *Cirsium*; rare or overlooked ..... ***Brunnipila clandestina***

7. On leaves of broadleaved trees; fruitbodies mostly less than 1 mm largehairs 60-150 µm long 8
   On wood; fruitbodies mostly more than 1 mm large; hairs up to 100-250 µm long 9



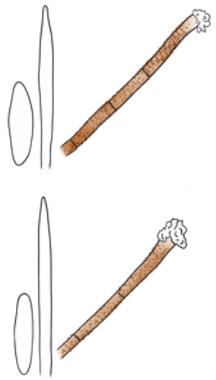
8. On leaves of *Quercus*. Fruitbody 0,3-1 x 0,3-1 mm, with a very short stem; hymenium flat, buffish; asci IKI+ (blue), 35-50 x 5-7 µm, 8-spored; spores drop- to spindle-shaped, 5,5-11 x 1,5-2,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding 15-25 µm above the asci; marginal hairs 75-90 µm long, pale brown to brown, encrusted; rare or overlooked ..... ***Brunnipila brunneola***



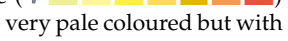
   On leaves of *Fagus* or other trees, but not *Quercus*. Fruitbody 0,3-1 x 0,3-1 mm, with a very short stem; hymenium depressed to flat, buffish; asci IKI+ (blue), 45-50 x 4-5 µm, 8-spored; spores spindle-shaped, 6-10,5 x 1,2-2,2 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 15-20 µm above the asci; marginal hairs 60-150 µm long, pale brown to brown, encrusted; known from leaves of *Carpinus, Fagus, Acer* and *Alnus* and also from *Fagus* cupules; rare or overlooked ..... ***Brunnipila fuscescens***



9. On wood of *Erica* and *Rhododendron*. Fruitbody 1-2 x 1-2 mm, with a hairy stem; hymenium depressed to flat, buffish; asci I+, 55-65 x 7,5-8 µm, 8-spored; spores spindle-shaped, 6,5-12,5 x 2-3,5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding about 10 µm above the asci; marginal hairs 100-225 µm long, hyaline, encrusted and typically with few and loosely attached crystals; known from of *Rhododendron hirsutum*, *R. ferrugineum* and possibly other *Ericaceae*; rare or overlooked .. ***Lachnum* [*Brunnipila*] *latebricola***
   On wood of other broadleaces trees. Fruitbody 0,5-2 x 0,5-2 mm, with a hairy stem; hymenium depressed to flat, buffish; asci IKI+ (blue), 60-70 x 5-8 µm, 8-spored, with croziers; spores spindle-shaped, 7,5-12 x 1,8-2,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 15-20 µm above the asci; marginal hairs 105-250 µm long, encrusted; known from twigs, cupules and wood of *Acer, Alnus, Corylus, Fagus* and *Sorbus*; rare or overlooked ..... ***Brunnipila calyculiformis***



10. Fruitbodies situated on a pale subiculum ..... see *Arachnopeziza*, key D
    Without a pale subiculum 11

11. Marginal hairs with yellowish or orange () colours; hairs in the microscope hyaline to very pale coloured but with with reddish or yellowish goo 12
    Marginal hairs ± brown, blueish or blackish (); hairs in the microscope ± brownish, blueish to blackish .. 27

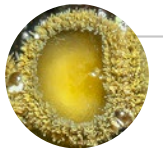
12. Margin with orange () hairs ..... [*Perrotia*] .. 13
    Margin with yellowish () hairs 16

13. Apical apparatus brownish red with Lugol . .see *Dennisiodiscus*, page xxx
Apical apperatus blue or I- 14



14. Spores 1,5-2,2 µm wide; on grasses . . . see *Albotricha albotastacea*, K58xx
Spores wider; on wood 15

15. Spores 10-18 µm long; Qav. below 5. Fruitbody 1-2,5 x 0,5-1 mm; hymenium depressed, buffish to buff orange; asci I-, 110-130 x 13-15 µm, 8-spored, with croziers; spores sausage-shaped, 10-18 x 2,5-4,5 µm, Qav. ≈ 4, smooth, 1-2-celled, oil contents ≈ 0%; paraphysis tips cylindrical, protruding 0-30 µm above the asci; marginal hairs 150-250 µm long, hyaline, with orange goo; known from deciduous wood of *Ligustrum, Malus, Pyrus, Quercus* and *Salix*; rare or overlooked . . . . . ***Perrotia flammea***
Spores 16-25 µm long; Qav. above 5. Fruitbody 0-1,5 mm wide, with a hairy stem; hymenium depressed to flat, orange to pinkish; asci I-, 80-100 x 10 µm, 8-spored, with croziers; spores spindle-shaped, 14-21 x 3-4 µm, Qav. ≈ 5, smooth, 1-2-celled; paraphysis tips cylindrical to lance-shaped, probably protruding above the asci; marginal hairs up to 150 µm long, hyaline, with orange goo; known from wood of *Populus* and *Lonicera*; rare or overlooked . . . . . ***Perrotia distincta***

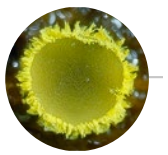


16. Hymenium and hairs brass yellow ();hairs wine red with KOH. Fruitbody 0,5-1,5 mm wide; asci 45-60 x 5-6 µm, 8-spored, without croziers; spores spindle-shaped, 4,5-8,5 x 2-3 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance-shaped to cylindrical, with VBs; marginal hairs up to 120 µm long, pale yellow to pale brown, encrusted; known from decorticated deciduous wood; rare or overlooked . . . . . ***Neodasyscypha cerina***
Not brass yellow; not wine red with KOH 17



17. Hymenium greenish-grey () . . . . . [*Amicodisca*] . . 18
Hymenium greyish, buffish, dark brownish violet or orange 20

18. Spores 7,5-14 µm long. Fruitbody 0,2-0,5 mm wide; hymenium flat; asci IKI+ (blue), 45-61 x 7,5-9,5 µm, 8-spored, with croziers; spores sausage- to bend-spindle-shaped, 7,5-14 x 2,5-3,5 µm, Qav. ≈ 3,5, smooth, 1-2-celled, oil contents ≈ 10%; paraphysis tips cylindrical; marginal hairs 20-50 µm long, pale yellow, with yellowish goo; known from wet lying wood of *Alnus* and *Betula*; rare or overlooked . . . . . ***Amicodisca svrcekii***
Spores longer 19



19. Marginal hairs 40-75 µm long. Fruitbody 0,3-0,6 mm wide; hymenium flat; asci IKIrb (red, blue after pretreatment), 65-95 x 9,5-13 µm, 8-spored, without croziers; spores bend-spindle-shaped, 15-25 x 3,5-5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical; marginal hairs up to 75 µm long, pale yellow, with yellowish goo; known from wet lying wood of *Salix*; rare or overlooked . . . . . ***Amicodisca virella***
Marginal hairs 80-120 µm long. Fruitbody 0,3-0,8 mm wide; hymenium flat; asci IKI+ (blue), 90-120 x 12-15 µm, 8-spored, without croziers; spores bend-spindle-shaped, 20-27 x 3-5 µm, Qav. ≈ 6, smooth, 1-4-celled, oil contents ≈ 10%; paraphysis tips cylindrical; marginal hairs 80-120 µm long, pale yellow, with yellowish goo; known from wet lying wood of *Betula*; rare or overlooked . . . . . ***Amicodisca groenlandica***

20. On *Myrica gale* . . . . . see *Incrucipulum sulphurellum*, key K
On other hosts . . . . . [*Trichopeziza* p.p.] . . 21

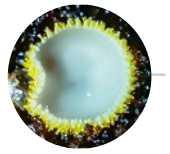
21. Spores longer than 25 µm 22
Spores shorter than 25 µm 23



22. Spores 26-32 µm long; hairs bright yellow. Fruitbody 0,5-2 mm wide; hymenium depressed to flat, cream to buffish, with age also vinaceous; asci IKIrb (red, blue after pretreatment), 83-110 x 6-10 µm, 8-spored, without croziers; spores cucumber-shaped, 26-32 x 2,5-3,5 µm, Qav.



≈ 9,5, smooth, 1-4-celled, oil contents ≈ 50-80%; paraphysis tips lance-shaped, protruding 10-20 µm above the asci; marginal hairs 150-170 µm long, pale yellow, with yellowish goo; known from stems of numerous large herbs including *Urtica dioica*; common . . ***Trichopeziza sulphurea***
Spores 50-75 µm long; hairs pale yellow. Fruitbody 0,5-1,5 mm wide; hymenium depressed, cream; asci IKIrb (red, blue after pretreatment), 110-135 x 7,5-10 µm, 8-spored, with croziers; spores thread-shaped, 50-75 x 2,5-3 µm, Qav. above 18, smooth, 2-17-celled; paraphysis tips cylindrical to lance-shaped; marginal hairs 200-400 µm long, hyaline, with yellowish goo; known from stems of *Urtica dioica*; rare or overlooked . . . . . ***Trichopeziza discolor***



23. On wood. Fruitbody 0,5-3 mm wide; hymenium depressed to flat, greyish to buffish; asci IKIrb (red, blue after pretreatment), 55-90 x 5-7 µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 7,5-13 x 2-3 µm, Qav. ≈ 4, smooth, 1-2-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped; marginal hairs 40-130 µm long, pale yellow, with yellowish goo; known from wood, e.g. of *Fagus, Populus* and *Ulmus*; rare or overlooked . . . . . ***Trichopeziza subsulphurea***
On stems of large herbs 24



24. Apical apparatus I-; without croziers; spores 2,5-3,5 µm wide, Qav. below 5. Fruitbody 0,5-2 mm wide; hymenium depressed to flat, dirty salmon to brownish vinaceous; asci 50-85 x 5-9 µm, 8-spored; spores ellipsoid, sausage-shaped to bend-spindle-shaped, 9,5-14 x 2,5-3,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips lance-shaped, protruding 5-20 µm above the asci; marginal hairs 100-150 µm long, pale yellow, with yellowish goo; known from of *Urtica*; rare or overlooked . . . . . ***Trichopeziza urticae***
Apical apparatus red in lugol (IKIrb); with croziers; spores 1,5-2,5 µm wide, Qav. above 5 25



25. Hymenium vinaceous grey, vinaceous to vinaceous brown (). Fruitbody 1-2 mm wide; hymenium depressed to flat; asci, 55-80 x 5-6,5 µm, 8-spored; spores spindle- to bend-spindle-shaped, 8-16 x 1,5-2,5 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical, protruding 10-25 µm above the asci; marginal hairs 100-250 µm long, pale yellow, with yellowish goo; known from dead stems of dicot herbs; rare or overlooked . . . . . ***Trichopeziza violascens***
Hymenium white, creme to pale grey () 26

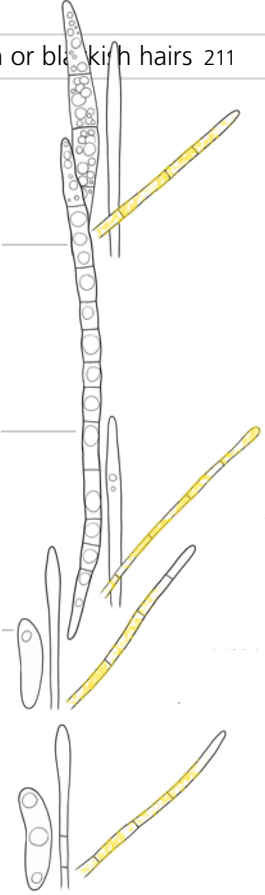


26. Outer hairs whitish to creme . . . . . see *Trichopeziza mollissima*, Jxx
Marginal hairs yellow, lower outer side hairs brownish. Fruitbody 1-3 mm wide; hymenium depressed to flat; asci 55-93 x 4-6 µm, 8-spored; spores spindle-shaped, 11-18 x 1,5-2 µm, Qav. ≈ 8,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 0-5 µm above the asci; marginal hairs 140-270 µm long, pale yellow to pale brown, with yellowish goo; known from dead stems of large herbs, e.g. *Urtica* and umbellifers; common . . . . . ***Trichopeziza leucophaea***



27. Marginal hairs hooked or with spiralling tips. Fruitbody 0,1-0,6 mm wide, sessile; hymenium flat, greyish to pale brown; asci IKI+ (blue), 45-70 x 10-15 µm, 8-spored; spores spindle-shaped, 15-19 x 3-5,5 µm, Qav. ≈ 4, smooth, 1-2-celled, oil contents ≈ 80%; paraphysis tips cylindrica; marginal hairs 45-90 µm long, brown to blackish, smooth; surrounded by its asexual blackish *Chaetochalara* state; known from dead stems to dead leaves of *Carex, Cladium* and *Juncus*; autumn-winter; rare or overlooked . . ***Phaeoscypha cladii***
Marginal hairs straight or curved 28

28. Hymenium cinnamon buff, yellowish to orange (. 29
Hymenium buffish, clay-pink, pale brownish or greyish (. 34





29. Spores 2-3 µm wide ... see *Trichopeziza lizonii* cpl. xx
Spores wider ... 30

30. Spores 18-31 µm long, on average above 20 µm, 2-4-celled; hairs strongly curled ... see *Tapesina griseovitellina*, Cxx
Spores on average below 20 µm, 1-2-celled; hairs ± straight ... [*Lachnellula* with dark hairs] ... 31



31. Apical apparatus blue in lugol (IKIbb); on wood of *Rhododendron ferrugineum* ... see *Chlorosplenium cenangium*, Cxx
Apical apparatus I-; on coniferous wood ... 32

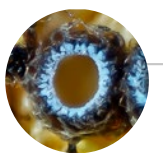
32. Sporer 6,5-12,5 µm long. Fruitbody 1-2,5 x 0,5-2 mm, with a short, hairy stem; hymenium depressed to flat, yellowish to orange; margin and flank with dark greyish brown hairs; asci 60-80 x 6-8 µm, 8-spored, with croziers; spores spindle-shaped, 6,5-12,5 x 3,5-5 µm, Qav. ≈ 2, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical to tapering, protruding above the asci; marginal hairs 200-300 µm long, pale brown, warty and with brownish goo; known from wood and cones of *Larix decidua, Pinus cembra, Pinus silvestris* and *Picea abies*; rare or overlooked ... ***Lachnellula flavovirens***
Spores longer ... 33



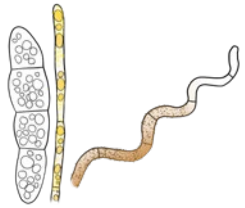
33. Spores 12-16 x 3,5-5,5 µm; on bark, wood and cones of *Pinus mugo, P. uncinata* and *P. cembra*. Fruitbody 1-2 x 0,5-1 mm, with a short hairy stem; hymenium depressed to flat, yellowish to orange; margin and flank with pale brown hairs; asci 70-90 x 9-10 µm, 8-spored, with croziers; spores spindle- to drop-shaped, 12-16 x 3,5-5,5 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical to tapering, protruding above the asci; marginal hairs 200-250 µm long, pale brown, warty and with brown goo; rare or overlooked ... ***Lachnellula fuscosanguinea***
Spores 13-22 x 4,5-7 µm; on needles of *Pinus sylvaticus*. Fruitbody 1-5 x 0,5-2 mm, with a short hairy stem; hymenium depressed to flat, yellowish to orange; margin and flank with pale brown hairs; asci 90-125 x 7-13 µm, 8-spored, with croziers; spores spindle- to drop-shaped, 13-22 x 4,5-7 µm, Qav. ≈ 3, smooth, 1-celled; paraphysis tips cylindrical to tapering, protruding above the asci; marginal hairs 90-165 µm long, pale brown, warty and with brown goo; rare ... ***Lachnellula pini***

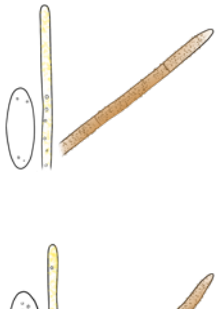


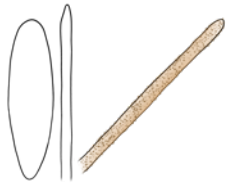
34. Fruitbodies with a 3-10 mm long stem; spores longitudinally striped in cotton blue; on conifer needles. Fruitbody 0,5-2 wide and 4-11 mm high; hymenium depressed, brownish; asci IKI+ (blue), 100-150 x 11-12 µm, 8-spored, without croziers; spores drop- to spindle-shaped, 16,5-23,5 x 4-5,5 µm, Qav. ≈ 4, 1-celled, oil contents ≈ 0-3%; paraphysis tips ± branched, cylindrical; marginal hairs 120-200 µm long, pale brown, smooth; winter–spring; rare or overlooked ... ***Pubigera subvillosula***
Fruitbodies sessile or with a short stem; spores smooth; not on conifer needles ... 35

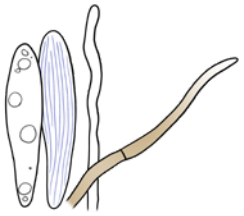


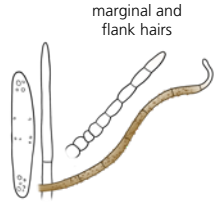
35. The dark brown hairs of the flanks strongly contrasting the pale blueish marginal hairs; marginal hairs in the microscope hyaline and molliniform with many, short cells. Fruitbody 0,2-0,5 mm wide; hymenium deeply depressed, buffish; asci red in lugol (IKIrr/rb), 75-100 x 6-6,5 µm, 8-spored, without croziers; spores spindle-shaped, 12-17 x 2,5-3 µm, Qav. ≈ 5,5, smooth, 1-2-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical; marginal hairs 50-70 µm long; flank hairs 100-250 µm long, pale brown, smooth to warty; known from dead stems of large herbs; rare or overlooked ... ***Solenopezia leucostoma***
More concolourous without much differentiation between outer surface and marginal hairs; without molliniform, marginal hairs ... 36













36. Outer sides very dark violaceous grey, dark bluish grey to almost black (🍄 ■■■) ... 37
Outer sides pale to dark brown (🍄 ■■■■■■) ... 40

37. Outer sides ± bluish grey (🍄 ■■), strongly contrasting the pale buff (🍄 ■) hymenium; apical apparatus I+; on deciduous trees. Fruitbody 0,5-1,5 mm wide, with a hairy stem; hymenium depressed, whitish to vinaceous; margin and flank with hairs; asci IKIrb (red, blue after pretreatment), 78-86 x 6-7,5 µm, 8-spored, with croziers; spores spindle-shaped, 12-15 x 2,5-3 µm, Qav. ≈ 5, smooth, 2-celled, oil contents ≈ 0-3-10%; paraphysis tips lance-shaped, protruding 0-5 µm above the asci; marginal hairs 80-190 µm long, brown, smooth to with dark goo; on wood of deciduous trees, e.g. *Populus* and *Ulmus*; rare and overlooked ... ***Trichopeziza flavofuliginea***
With other colours; apical apparatus I-; on coniferous trees ... 38



38. Asci 35-60 µm long; spores on average shorter than 16 µm. Fruitbody 0,2-0,5 mm wide, sessile; hymenium depressed, greyish; asci 35-60 x 9-12 µm, 8-spored, with croziers; spores spindle-shaped, 11-17,5 x 2,5-3,5 µm, Qav. ≈ 5, smooth, 1-2-celled, oil contents ≈ 3-25%, with or without a 2-ended slime coating; paraphysis tips cylindrical; marginal hairs 60-100 µm long, thick-walled, dark brown to blackish, smooth; known from wood of *Picea* and *Pinus*; all year round; rare or overlooked ... ***Venturioscypha nigropila***
Asci more than 70 µm long; spores on average longer than 16 µm ... 39



39. Spores with rounded ends, 15-25 µm long ... see *Crumenulopsis sororia*, Bxx
Spores with acute ends, 20-34 µm long ... see *Crumenulopsis pinicola*, Bxx

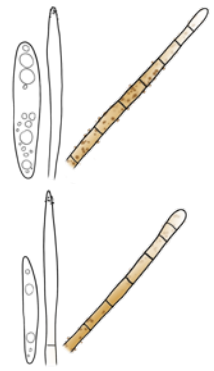
40. With straight and densely septate, hairs both at the margin and below; fruitbodies with a rather well-groomed appearance ... [*Trichopezizella*] ... 41
With more distantly septate hairs at the margin and often with wavy to curly, disorderly hairs below; fruitbodies with a more untidy appearence ... [*Lasiobelonium* & *Trichopeziza* p.p.] ... 45



41. Apical apparatus red in lugol (IKIrb); fruitbodies relatively high and obviously stipitate. Fruitbody 0,5-1 mm wide, with an hairy stem; hymenium depressed, greyish to buffish; asci 50-65 x 6,5-7,5 µm, 8-spored, with croziers; spores spindle-shaped, 11,5-16 x 2-3 µm, Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical to lance-shaped, protruding 0-20 µm above the asci; marginal hairs 240-360 µm long, brown, smooth to encrusted and with goo; known from dead stems of larger herbs, e.g. *Adenostyles, Aconitum* and *Epilobium*; rare or overlooked ... ***Trichopezizella relicina***
Apical apparatus blue in lugol (IKIbb); fruitbodies broad and subsessile ... 42

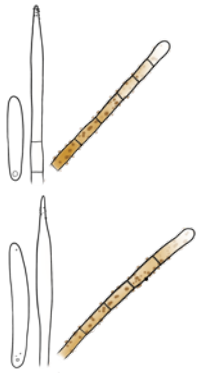
42. With croziers ... 43
Without croziers ... 44

43. On *Schoenoplectus*; spores 2,5-3,5 µm wide. Fruitbody 0,4-2 mm wide; hymenium depressed, greyish to buffish; asci IKI+ (blue), 65-80 x 7,5-8,5 µm, 8-sporeds; spores spindle-shaped, 13-18 x 2,5-3,5 µm, Qav. ≈ 5, smooth, 1-1-2-celled, oil contents ≈ 50%, with without to 1-ended slime coating; paraphysis tips lance-shaped, protruding 5,5-8 µm above the asci; marginal hairs 110-210 µm long, pale brown, smooth to encrusted and with goo; rare or overlooked ... ***Trichopezizella schoenoplecti* nom. prov.**
On *Filipendula, Lysimachia* and other larger dicot herbs; spores 1,5-2 µm wide. Fruitbody 0,5-2 mm wide; hymenium depressed, greyish to buffish; asci IKI+ (blue), 50-75 x 5-7 µm, 8-spored; spores spindle-shaped, 10-14,5 x 1,5-2 µm, Qav. ≈ 7, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding 15-25 µm above the asci; marginal hairs 90-130 µm long, pale brown, smooth to encrusted and with goo; rare or overlooked ... ***Trichopezizella subnidulus* nom. prov.**



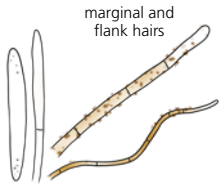


44. On *Polygonatum*. Fruitbody 0,2-1 mm wide; only with a rudimentary stem; hymenium depressed to flat, greyish to buffish; asci IKI+ (blue) 50-58 x 5-6 µm, 8-spored; spores spindle-shaped, 6-12 x 1,5-2 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 6-15 µm above the asci; marginal hairs 100-140 µm long, brown, smooth and with goo; common ..... ***Trichopezizella nidulus***
On other hosts. Fruitbody 0,5-2 mm wide; hymenium depressed to flat, greyish to buffish; asci IKI+ (blue) 50-75 x 5-7 µm, 8-spored; spores spindle-shaped, 10-17 x 1,5-2,5 µm, Qav. ≈ 7, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding 15-25 µm above the asci; marginal hairs 150-200 µm long, brown, smooth and with goo; known from dead stems of e.g. *Aconitum, Epilobium, Melandrium, Rumex, Sambucus ebulus* and *Urtica*; rare or overlooked ..... ***Trichopezizella rubroguttata***

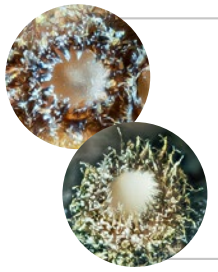


45. On stems of herbs (including grasses) 46
On wood 49

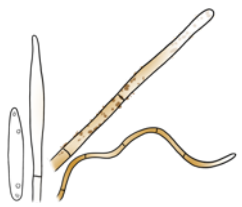
46. Apical apparatus red in lugol (IKIrb); fruitbodies relatively high and obviously stipitate ..... see *Trichopezizella relicina*, cpl. xx
Apical apparatus blue in lugol (IKIbb); fruitbodies broad and subsessile 47

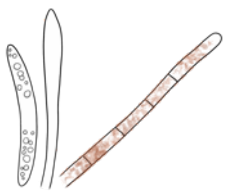


47. On *Carex* or grasses. Fruitbody 0,4-1 mm wide; hymenium depressed, greyish to buffish; asci 50-80 x 5-6,5 µm, 8-spored, with croziers; spores spindle-shaped, 9-20 x 1,5-2,5 µm, Qav. ≈ 7,5, smooth, 1-2-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding 5,5-8 µm above the asci; marginal hairs 100-200 µm long, pale brown, smooth and with goo; rare or overlooked ..... ***Lasiobelonium horridulum***
On dicots and *Asparagus* 48

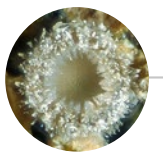


48. Spores on average shorter than 12 µm. Fruitbody 0,5-1 mm wide; hymenium depressed, buffish; asci 55-65 x 5,5-6 µm, 8-spored, with croziers; spores spindle-shaped, 8,5-13 x 1,5-2,2 µm, Qav. ≈ 6, smooth, 1-2-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding 10-22 µm above the asci; marginal hairs 150-200 µm long, pale brown, smooth and with goo; known from dead stems of larger herbs, e.g. *Asparagus, Berberis, Conium, Epilobium, Geranium, Hedera* and *Sambucus ebulus* and on wood of *Berberis*; rare or overlooked ..... ***Lasiobelonium lanceolatum***
Spores on average longer than 12 µm. Fruitbody 0,5-2 mm wide, sessile; hymenium depressed to flat, pale apricot orange; asci IKIrb (red, blue after pretreatment) to IKI+ (blue), 56-68 x 4,5-6,5 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 11-22,5 x 2-3 µm, Qav. ≈ 6,5, smooth, 1-2-celled, oil contents ≈ 10-50%; paraphysis tips lance-shaped, with guttules, protruding 8-12 µm above the asci; marginal hairs 60-100 µm long, pale brown, smooth to with goo; known from dead stems of *Artemisia vulgaris* and *Astragalus*; summer–autumn; rare or overlooked ..... ***Trichopeziza lizonii***

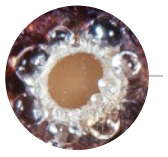




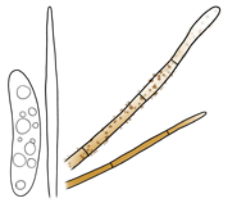
49. Spores with about 25-50% oil 50
Spores with 0-10 % oil 52



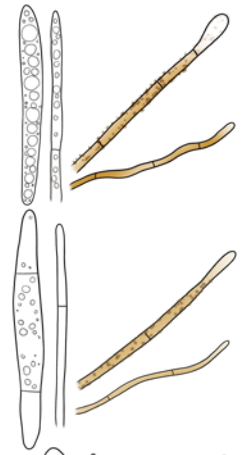
50. Spores 9-17 µm long. Fruitbody 0,5-1 mm wide; hymenium depressed, buffish; asci IKIrb (red, blue after pretreatment) or IKIbb (blue), 50-90 x 5-9 µm, 8-spored, with croziers; spores spindle-shaped, 9-17 x 2,5-4 µm, Qav. ≈ 4, smooth, 1-2-celled, oil contents ≈ 50%; paraphysis tips cylindrical to lance-shaped, protruding 0-8 µm above the asci; marginal hairs 100-180 µm long, ± brown, smooth and with goo; known from deciduous wood; rare or overlooked ..... ***Lasiobelonium lonicerae***
Spores longer 51



51. Apical apparatus red in lugol (IKIrb). Fruitbody 0,5-1,5 mm wide; hymenium depressed, buffish; asci 80-130 x 7,5-10,5 µm, 8-spored,



with croziers; spores spindle- to bend-spindle-shaped, 18-29 x 3,5-4,5 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 50%; paraphysis tips cylindrical, protruding 0-22 µm above the asci; marginal hairs 80-200 µm long, ± brown, smooth and with goo; known from wood deciduous wood, e.g. *Fraxinus* and *Populus*; rare or overlooked ..... ***Lasiobelonium corticale* ss. Baral**
Apical apparatus blue in lugol (IKIbb). Fruitbody 0,4-1 mm wide; hymenium depressed, buffish; asci 95-135 x 6-9,5 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 20-35 x 3-4,5 µm, Qav. ≈ 7,5, smooth, 1-4-celled, oil contents ≈ 25%; paraphysis tips cylindrical, protruding 5-20 µm above the asci; marginal hairs 120-160 µm long, ± brown, smooth and with goo; known from deciduous wood e.g. *Acer, Betula* and *Salix*; rare or overlooked ..... ***Lasiobelonium belanense***



52. On coniferous wood; spores soon 2-4-celled; fruitbodies remarkably pale (). Fruitbody 1-2,5 mm wide; hymenium flat to depressed; asci IKI+ (blue), 80-125 x 6-9 µm, 8-spored, with croziers; spores spindle-shaped, 13-20 x 3-4 µm, Qav. ≈ 4,5, smooth, oil contents ≈ 0-10%; paraphysis tips lance-shaped, protruding 0-15 µm above the asci; marginal hairs 40-110 µm long, pale brown, smooth and to with goo; known from *Abies* and *Picea*; rare or overlooked ..... ***Lasiobelonium pseudocorticale***
On deciduous wood; spores mostly 1-2-celled; fruitbodies mostly darker 53

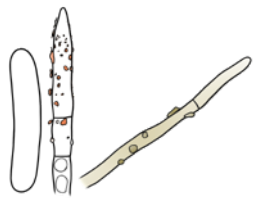


53. Apical apparatus red in lugol (IKIrb); on *Lonicera*. Fruitbody 1-2 mm wide; hymenium depressed, ± greyish; asci 50-95 x 5-10 µm, 8-spored, with croziers; spores spindle-shaped, 14-17 x 2-4 µm, Qav. ≈ 5, smooth, 2-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding 5-16 µm above the asci; marginal hairs 200-350 µm long, ± brown, smooth to warty and with goo; rare or overlooked ..... ***Trichopezizella* [→*Lasiobelonium*] *barbata***
Apical apparatus I- or blue in lugol (IKIbb); on other hosts 54

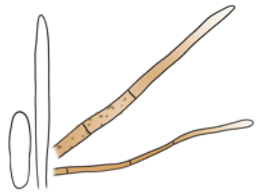




54. Apical apparatus I-; asci without croziers; spores cylindrical to sausage-shaped. Fruitbody 0,5-1,5 mm wide, sessile; hymenium depressed, pale apricot orange; asci 110-135 x 8-11 µm, 8-spored; spores cylindrical to sausage-shaped, 12-19 x 3-4 µm, Qav. ≈ 4,5, smooth, 1-2-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, encrusted; marginal hairs 80-160 µm long, pale brown, encrusted or with goo; known from wood of *Alnus, Quercus ilex*, and *Salix*; autumn-winter; rare or overlooked ..... ***Trichopeziza perrotioides* nom. prov.**
Apical apparatus blue in lugol (IKIbb); spores spindle-shaped 55

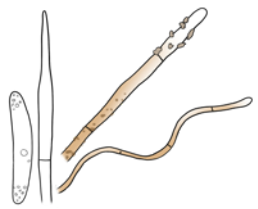


55. Spore Qav. below 4; outer surface hairs 60-120 µm long. Fruitbody 0,5-1,5 mm wide; hymenium depressed, buffish; asci 50-75 x 5-6 µm, 8-spored, with croziers; spores spindle-shaped, 6-11 x 2-3 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical to lance-shaped; marginal hairs 60-120 µm long, pale brown, smooth and with goo; known from deciduous wood, e.g. *Populus, Betula* and *Salix*; rare or overlooked ..... ***Lasiobelonium populi***
Spore Qav. above 4; outer surface hairs up to 200 µm long 56





56. Spores 1,5-2,2 µm wide ..... see *Lasiobelonium lanceolatum*, cpl. xx
Spores 2-3,5 µm wide. Fruitbody 0,5-2 mm wide; hymenium depressed, buffish; margin and flank with brown hairs; asci 45-80 x 4,5-7,5 µm, 8-spored, with croziers; spores spindle-shaped, 9-15 x 2-3,5 µm, Qav. ≈ 4,5, smooth, 1-2-celled, oil contents ≈ 3%; paraphysis tips cylindrical to lance-shaped, protruding 5-12 µm above the asci; marginal hairs 130-220 µm long, ± brown, smooth and with goo; known from deciduous trees, e.g. *Acer, Fagus, Fraxinus, Populus, Robinia* and *Salix*; rather common ..... ***Lasiobelonium variegatum***

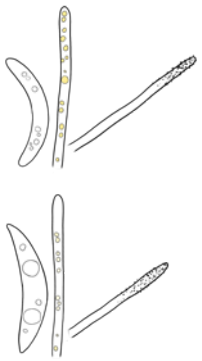


Key J – hairy discs with whitish hairs and yellow to orange hymenium
(e.g. *Capitotricha*, *Lachnellula* and *Proliferodiscus*)

1. Spores strongly bend; on *Pinus* needles . . . . . [*Erioscyphella*] . . 2
Spores not strongly bend; on other substrates 3

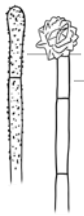


2. Spores 1,5-2,5 µm wide, mostly with slightly rounded ends; asci 45-65 µm long. Fruitbody 0,4-0,5 mm wide; hymenium depressed, yellowish; asci IKI+ (blue), 45-65 x 5-6 µm, 8-spored, without croziers; spores allmost new-moon-shaped, 10,5-16 x 1,5-2,5 µm, Qav. ≈ 4-6,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips flame- to lance-shaped; marginal hairs 55-80 µm long, encrusted; known from needles of *Pinus*; rare or overlooked . . . . . ***Erioscyphella curvispora***
Spores 2,5-3,5 µm wide, with acute ends; asci 60-100 µm long. Fruitbody 0,2-0,7 mm wide, with a hairy stem; hymenium depressed, yellowish; asci IKI+ (blue), 60-100 x 6-8 µm, 8-spored, without croziers; spores new-moon-shaped, 12,5-17 x 2,5-3,5 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips lance-shaped; marginal hairs 52-80 µm long, encrusted; known from needles of *Pinus nigra*; rare or overlooked. . . . . ***Erioscyphella lunata***



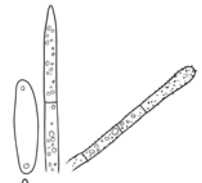


3. Fruitbodies fragile; paraphyses ± lance-shaped; on wood, leaves, herbs, etc. 4
Fruitbodies rather though and drought tolerant; paraphyses ± cylindrical; on; on wood, resin and cones of conifers 13



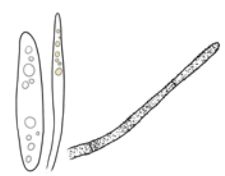
4. Hairs without large crystals 5
Hairs with large crystals at the tips, but easily detaching, so that they float freely in the preparation . . . . . [*Capitotricha*] . . 7

5. Marginal hairs 35-45 µm long; spores 7-13 µm long; mostly on wood. Fruitbody 0,5-3 x 2-10 mm, with a hairy stem; hymenium depressed to flat, pale orange-yellow; asci IKI+ (blue), 50-100 x 4-7 µm, 8-spored, with croziers; spores spindle-shaped to cylindrical, 7-13 x 2-2,5 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding up to 15 µm above the asci; known from coniferous and deciduous wood; rare or overlooked . . . . . ***Lachnum pygmaeum***
Marginal hairs 40-80 µm long; spores longer than 12 µm; on monocots . . 6





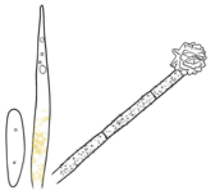
6. On *Eriophorum*; hymenium pale apricot-orange. Fruitbody 0,3-0,6 x 0,3-1 mm, almost sessile; hymenium flat; asci IKI+ (blue), 62-83 x 6,5-7,5 µm, 8-spored, without croziers; spores spindle-shaped, 14,5-30 x 2,3-2,7 µm, Qav. ≈ 9, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips lance-shaped, protruding 10-20 µm above the asci; marginal hairs 50-80 µm long, encrusted; rare or overlooked . . . . . ***Lachnum imbecille***
On *Cladium*, *Eriophorum*, *Juncus* and *Carex*; hymenium clear yellow. Fruitbody 0,2-1 x 1-2 mm, with a hairy stem; hymenium flat; asci IKI+ (blue), 60-100 x 6-9,5 µm, 8-spored; spores spindle-shaped, 12-21 x 2-3,5 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 65-80 to 50%, sometimes with a 1-ended to surrounding slime coating; paraphysis tips lance-shaped, protruding 20-30 µm above the asci; marginal hairs 40-80 µm long, encrusted; known from; rare or overlooked . . . . . ***Lachnum juncinum***





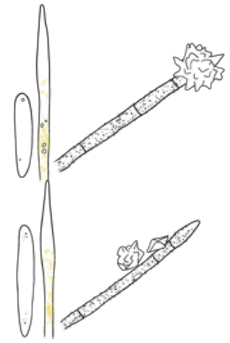
7. On wood, cupules or leaves of deciduous trees 8
On herbs including *Rubus* 10

8. On leaves of *Quercus*; with croziers Fruitbody 0,3-1 x 0,5-1 mm, with a hairy stem; hymenium flat, orange or rarely whitish; asci IKI?, 40-60 x 5-6,5 µm, 8-spored; spores spindle-shaped to drop-shaped, 6-10 x 2-2,5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 4-18 µm above the asci; marginal hairs 90-190 µm long, hyaline, encrusted; rare or overlooked ***Lachnum* [*Capitotricha*] *patulum***
On other substrates; without croziers 9





9. On wood of *Quercus* and other deciduous trees, but not *Fagus* (?); spores on average less than 11 µm long. Fruitbody 0,5-2,5 x 0,5-1 mm, with a hairy stem; hymenium flat, orange; asci IKI+ (blue), 70 x 5,5-6 µm, 8-spored; spores spindle-shaped, 7-12 x 2-3 µm, Qav. ≈ 4, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 20 µm above the asci; marginal hairs 120-170 µm long, encrusted; rather common . . ***Capitotricha bicolor***
On leaves, cupules and wood of *Fagus*; spores on average more than 11 µm long. Fruitbody 0,5-2,5 x 1-1,5 mm, with a hairy stem; hymenium flat, orange; asci IKI+ (blue), 50-80 x 6-7,5 µm, 8-spored; spores spindle-shaped, 9-17 x 1,7-3 µm, Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 6-15 µm above the asci; marginal hairs 100-200 µm long, encrusted; rare or overlooked . . . . . ***Capitotricha fagiseda***



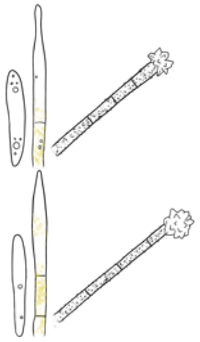
10. *Pterospartum tridentatum* (and other woody legumes?); spores 15-27 µm long, with several transverse septae. Fruitbody 0,5-1,5 x 0,5-1 mm, with a hairy stem; hymenium flat, orange; asci IKI+ (blue), 75-100 x 8-12 µm, 8-spored, with croziers; spores spindle-shaped, 15-27 x 4-5 µm, Qav. ≈ 4,5, smooth, 2-6-celled, oil contents ≈ 0-10%; paraphysis tips lance-shaped, protruding 10-15 µm above the asci; marginal hairs 110-200 µm long, encrusted; rare or overlooked . . . . . ***Capitotricha pterosparti* nom. prov.**
On other hosts; spores different 11



11. On stems of *Rubus*; without croziers. Fruitbody 0,5-2,5 x 1-1,5 mm, with a hairy stem; hymenium flat, orange; asci IKI+ (blue), 45-65 x 5-6 µm, 8-spored; spores drop-shaped, 6-10 x 1,5-2 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 15-30 µm above the asci; marginal hairs 120-180 µm long, encrusted; rare or overlooked . . . . . ***Capitotricha rubi***
On other substrates; with croziers 12



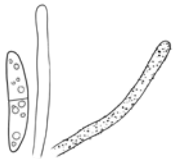
12. On *Phragmites*. Fruitbody 0,5-1,5 x 0,5-1 mm, with a hairy stem; hymenium flat, orange; asci IKI+ (blue), 4+-60 x 5,5-7 µm, 8-spored; spores spindle-shaped, 8-15 x 2-3 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 25%; paraphysis tips lance-shaped, protruding 15-20 µm above the asci; marginal hairs 80-140 µm long, encrusted; rare or overlooked . . . . . ***Capitotricha phragmiticola* nom. prov.**
On *Rumex suffruticosus*. Fruitbody 0,5-1,5 x 0,5-1 mm, with a hairy stem; hymenium flat, oranges; asci IKI+ (blue), 65-80 x 7-8 µm, 8-spored; spores spindle-shaped, 14-16 x 2,5-3 µm (smaller when dry), Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 10-22 µm above the asci; marginal hairs 80-150 µm long, encrusted; rare or overlooked . . . . . ***Capitotricha attenuans***



13. Margin and outer surface hairs greyish or blueish grey; dark vine-red with KOH; on deciduous wood . . . . . [*Proliferodiscus*] . . 14
Margin and outer surface hairs white; not vine-red with KOH; on coniferous wood and cones . . . . . [*Lachnellula*] . . 16

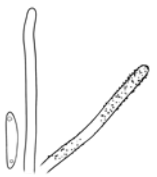


14. Outer surface hairs blueish grey and hymenium brownish yellow; spores 9-15 x 2,5-3,5 µm . . . . . see *Proliferodiscus tricolor*, Jxx
Outer surface hairs pale greyish and hymenium bright yellow; spores smaller 15



15. On *Castanea*; outer surface hairs 50-75 µm long. Fruitbody 0,5-1,2 mm wide; hymenium depressed; asci IKI+ (blue), 40-50 x 5 µm, 8-spored, with croziers; spores drop-shaped to loaf-shaped, 4-7 x 1,4-1,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical, with guttules; marginal hairs hyaline, encrusted; known from wood of *Castanea*; rare or overlooked . . . . . ***Proliferodiscus inspersus***
On other deciduous hosts, e.g. *Quercus*; hairs 90-200 µm long. Fruitbody 0,3-1,5 mm wide, often with new fruitbodies developing inside older; hymenium depressed to flat; asci IKI+ (blue), 35-60 x 4-6 µm, 8-spored, with or without croziers; spores drop-shaped to loaf-shaped, 5-9 x 1,2-2 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical,



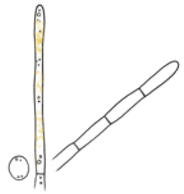


with guttules; marginal hairs hyaline, encrusted; known from deciduous wood, e.g. of *Quercus*; rare or overlooked ... ***Proliferodiscus pulveraceus***

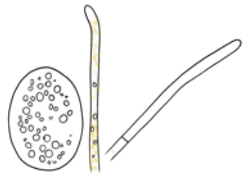


16. Spore Qav. below 1,6 ... 17
Spore Qav. above 1,6 ... 20

17. Spores 2,5-3,5 µm long. Fruitbody 1-2 x 0,5-1 mm, with a hairy stem; hymenium depressed to flat, yellowish to orange; asci I-, 40-45 x 4,5-5,5 µm, 8-spored, with croziers; spores ± globose to subglobose, 2,5-3,5 x 2-3 µm, Qav. ≈ 1,2, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical to tapering; marginal hairs 50-150 µm long, warty; known from wood and cones of *Pinus* and other conifers; scattered ... ***Lachnellula calycina***
Spores longer ... 18

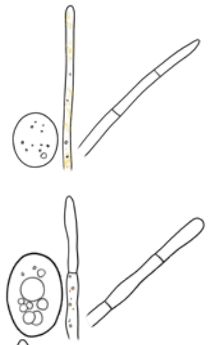


18. Spores on average more than 11 µm long. Fruitbody 1-5 x 0,5-2 mm, with a hairy stem; hymenium depressed to flat, ± orange; asci I-, 120-155 x 14,5-16 µm, 8-spored, with croziers; spores ellipsoid to spindle-shaped, 10,5-16 x 8-11 µm, Qav. ≈ 1,4, smooth, 1-celled, oil contents ≈ 50%; paraphysis tips cylindrical to tapering; marginal hairs 80-300 µm long, warty; known from wood and cones of *Abies alba*; rare or overlooked ... ***Lachnellula robusta***
Spores shorter ... 19



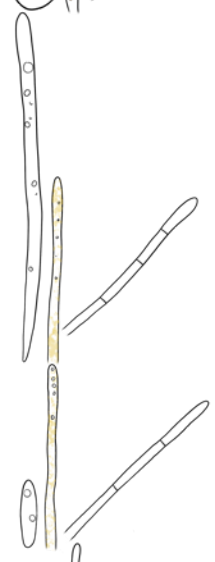


19. Spores globose to subglobose (Qav. ≈ 1-1,2); apical apparatus red in lugol (IKIrr/rb). Fruitbody 1-8 x 0,5-2 mm, with a hairy stem; hymenium depressed to flat, ± orange; asci 65-95 x 6-8,5 µm, 8-spored, with croziers; spores 4-8 x 4-6 µm, Qav. ≈ 1,2, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical to tapering; marginal hairs 100-200 µm long, warty; known from wood of coniferous trees; rare or overlooked ... ***Lachnellula suecica***
Spores broadly ellipsoid to broadly spindle-shaped (Q ≈ 1,4); apical apparatus I-. Fruitbody 1-4 x 0,5-1,5 mm, with a hairy stem; hymenium depressed to flat, ± orange; asci 90-125 x 8-12,5 µm, 8-spored, with croziers; spores 6,5-11,5 x 5,5-7 µm, Qav. ≈ 1,4, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical to tapering; marginal hairs 100-300 µm long, warty; known from wood and cones of conifers, e.g. *Abies alba* and *Picea abies*; rare or overlooked ... ***Lachnellula gallica***





20. Spores thread-shaped, longer than 60 µm. Fruitbody 0,5-1,5 x 0,5-1 mm, with a hairy stem; hymenium depressed to flat, orange; asci IKIrb (red, blue after pretreatment), 60-120 x 8-12 µm, 8-spored, with croziers; spores 70-97 x 1,5-2,5 µm, Qav. more than 35, smooth, 6-8-celled; paraphysis tips cylindrical to tapering; marginal hairs 100-300 µm long, smooth; known from wood and cones *Pinus*; rare or overlooked ... ***Lachnellula pseudofarinacea***
Spores drop- to spindle-shaped, shorter than 30 µm ... 21

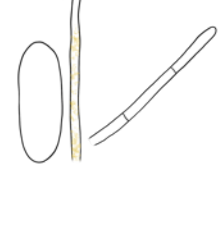




21. Apical apparatus red (IKIrb/rr) in lugol ... 22
Apical apparatus I- ... 24

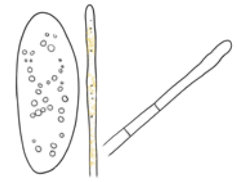
22. Spores 5-9 µm long. Fruitbody 1-4,5 x 0,5-2 mm, with a hairy stem; hymenium depressed to flat, yellowish to orange; asci 50-70 x 3-6 µm, 8-spored, with croziers; spores spindle- to drop-shaped, 5-9 x 2-3 µm, Qav. ≈ 3, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips cylindrical to tapering; marginal hairs 85-210 µm long, warty; known from woo of conicers, e.g. *Abies*, *Cedrus*, *Cryptomeria*, *Picea*, *Pinus*, *Pseudotsuga* and possibly also *Larix*; rare or overlooked ... ***Lachnellula subtilissima***
Spores longer than 10 µm ... 23

23. Spores on averige shorter than 16 µm. Fruitbody 1-3 x 0,5-1,5 mm, with a hairy stem; hymenium depressed to flat, orange; asci 105-130 x 10-14 µm, 8-spored, with croziers; spores ellipsoid, 10-17,5 x 5-7,5 µm, Qav. ≈ 2, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical to tapering; marginal hairs 200-250 µm long, warty; known from wood of *Larix*; rare or overlooked ... ***Lachnellula laricis***





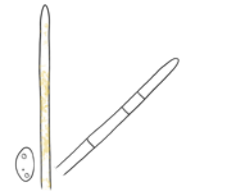
Spores on average longer than 16 µm. Fruitbody 1-4 x 0,5-2 mm, with a hairy stem; hymenium depressed to flat, orange; asci 150-190 x 12-15 µm, 8-spored, with croziers; spores ellipsoid to loaf-shaped, 14-24 x 6-9 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips cylindrical to tapering; marginal hairs 70-120 µm long, warty; known from cones and wood of *Larix*; rare or overlooked ... ***Lachnellula occidentalis***

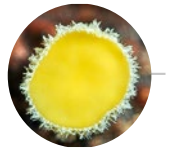




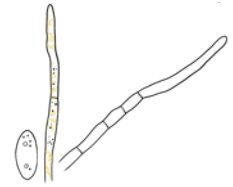
24. Spores on average shorter than 11 µm ... 25
Spores longer than 11 µm ... 27

25. Spores 2,5-4,5 µm long. Fruitbody 1-2 x 0,5-1 mm, with a hairy stem; hymenium depressed to flat, yellowish to orange; asci 35-55 x 4-5 µm, 8-spored, with croziers; spores spindle-shaped, 2,5-4,5 x 1,5-2,5 µm, Qav. ≈ 2, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to tapering; marginal hairs 50-150 µm long, warty; known from resin and wood of *Picea* and *Pinus*; rare or overlooked ... ***Lachnellula resinaria***
Spores longer ... 26





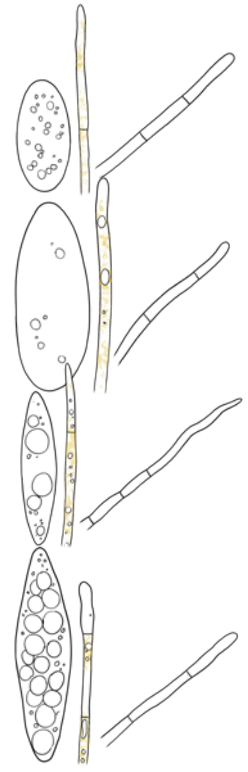
26. Spores 5-6,5 µm long; without croziers. Fruitbody 1-5 x 0,5-1,5 mm, with a hairy stem; hymenium depressed to flat, yellowish to orange; asci 55-70 x 5,5-6,5 µm, 8-spored; spores spindle-shaped, 5-6,5 x 2,5-3,5 µm, Qav. ≈ 2, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips cylindrical to tapering; marginal hairs 90-200 µm long, warty; known from wood of various conifers, e.g. *Abies alba*, *Picea abies*, *Pinus mugo* and *Pinus silvestris*; rare or overlooked ... ***Lachnellula calyciformis***
Spores 6,5-11 µm long; with croziers. Fruitbody 1-1,5 x 0,5-1 mm, with a hairy stem; hymenium depressed to flat, yellowish to orange; asci 55-56 x 5,5-7 µm, 8-spored; spores spindle- to drop-shaped, 6,5-11,5 x 5-7 µm, Qav. ≈ 1,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips cylindrical to tapering; marginal hairs up to 120 µm long, warty; a badly known taxon reported from wood of *Juniperus*; rare ... ***Lachnellula juniperina***



27. Spore Qav. lower than 3 ... 28
Spore Qav. higher than 3 ... 29

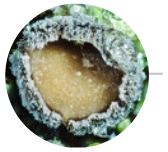


28. Spores 11-17 µm long; known from wood of *Pinus*. Fruitbody 1-4 x 0,5-2 mm, with a hairy stem; hymenium depressed to flat, orange; asci 90-130 x 12,5-14 µm, 8-spored, with croziers; spores spindle-shaped, 11-17 x 5,5-7 µm, Qav. ≈ 2, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips cylindrical to tapering; marginal hairs 100-300 (-400) µm long, warty; rare or overlooked ... ***Lachnellula fuckelii***
Spores 18-26 mm long; a parasite forming cankers in wood of *Larix*. Fruitbody 1-3 x 0,5-,5 mm, with a hairy stem; hymenium depressed to flat, yellowish to orange; asci 135-215 x 11-13 µm, 8-spored, with croziers; spores spindle-shaped, 18-26,5 x 8-10,5 µm, Qav. ≈ 2,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips cylindrical to tapering; marginal hairs warty; scattered ... ***Lachnellula willkommii***



29. Spores 12,5-21 x 3,5-5 µm. Fruitbody 1-2 x 0,5-1 mm, with a hairy stem; hymenium depressed to flat, orange; asci 65-100 x 9,5-14 µm, 8-spored, with croziers; spores spindle-shaped, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 50%; paraphysis tips cylindrical to tapering; marginal hairs 100-300 µm long, warty; known from wood of *Picea*; rare or overlooked ... ***Lachnellula abietis***
Spores 20-35 x 5-7,5 µm. Fruitbody 1-3 x 0,5-1,5 mm, with a hairy stem; hymenium depressed to flat, yellowish to orange; asci 115-140 x 13-17 µm, 8-spored, with croziers; spores spindle-shaped, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 25-50%; paraphysis tips cylindrical to tapering; marginal hairs 80-150 µm long, warty; known from wood and cones of *Picea*; rare or overlooked ... ***Lachnellula splendens***

Key K – hairy discs with whitish hairs and white, cream, buff or coral hymenium, e.g. *Dasyscyphella, Incrucipilum* and *Lachnum*



1. On wood or fruit capsules 2
   On leaves, bud-scales, conifer needles, cones, ferns or herbs (including *Rubus* and grasses) 29

2. Fruitbodies though and ± drought resistent; margin and outer surface hairs greyish or blueish grey, inrolled margin and hymenium brownish yellow; dark vine-red with KOH. Fruitbody 0,8-2,5 mm wide; hymenium depressed to flat; asci IKI+ (blue), 90-100 x 7-9,5 µm, 8-spored; spores spindle-shaped, 9-15 x 2,5-3,5 µm, Qav. ≈ 4, smooth, 1-2-celled, oil contents ≈ 25%; paraphysis tips cylindrical, with guttules; marginal hairs 100-250 µm long, hyaline, encrusted; known from *Quercus*; rare . . . . . ***Proliferodiscus tricolor***





   Fruitbodies fragile; coloures different; not vine-red with KOH 3

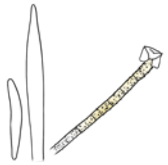
3. Marginal hairs smooth 4
   Marginal hairs partly or wholly encrusted or warty 5

4. On deciduous wood . . . . . see *Psilocistella vernalis*, Xxx
   On coniferous wood . . . . . see *Eupezizella aureliella*, Xxx

5. Marginal hairs finely encrusted to the tips . . . . . [*Lachnellula* p.p., *Lachnum* p.p., *Incrucipulum* p.p.] . . 6
   Marginal hairs with naked tips, but possibly with large scattered crystals 15



6. On twigs of *Myrica gala*; hairs pale yellowish. Fruitbody 0,3-1 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 40-44 x 3-4 µm, 8-spored, without croziers; spores spindle-shaped, 6-12 x 1,2-2 µm, Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 12-15 µm above the asci; marginal hairs 50-90 (-120) µm long, encrusted and crowned by large bi-pyrimidal crystals; common . . . . . ***Incrucipulum sulphurellum***

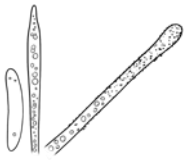


   On other hosts; hairs whitish, but sometimes reddish or orange when bruised or drying 7

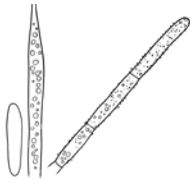
7. Outer surface and hairs reddish or orange (→) when bruised or drying; paraphyses with VBs 8
   Outer surface and hairs persistently whitish or pale yellowish (); paraphyses without VBs 11

8. With croziers 9
   Without croziers 10

9. Asci 50-80 x 5,5-6,5µm, on parts of coniferous trees. Fruitbody 0,6-3 wide and 1-3 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 50-80 x 5,5-6,5 µm, 8-spored; spores drop-, spindle- to bend-spindle-shaped, 6-12 x 1,5-2,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding 0-12 µm above the asci; marginal hairs 50-80 µm long, encrusted; known from cones, bark of oniferous trees; rare or overlooked . . . . . ***Lachnum papyraceum* ss. Zotto key**

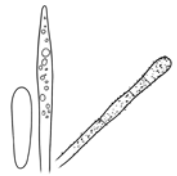


   Asci 40-55 x 3,5-5,5 µm; on wood of deciduous trees. Fruitbody 0,5-1,5 wide and 2-3,5 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 40-55 x 3,5-5,5 µm, 8-spored, with croziers; spores spindle- to dropshaped, 6-9,5 x 1,5-2,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding 20-25 µm above the asci; marginal hairs 45-85 µm long; known from deciduous wood, e.g. branches of *Alnus* and *Crataegus*; rare or overlooked . . . . . ***Lachnum fasciculare***

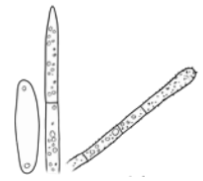




10. Spores 1,5-2,3 µm wide, on average less then 2,2 µm. Fruitbody 0,6-2 wide and 1-3 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 40-60 x 4-5 µm, 8-spored; spores spindle- to drop-shaped, 7-11 x 1,5-2,3 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding 15-30 µm above the asci; marginal hairs 50-85 µm long; known from corticated branches of deciduous trees; rare or overlooked . . . . . ***Lachnum pudibundum***



   Spores 2-3,5 µm wide, on average more than 2.2 µm. Fruitbody 0,4-2 wide and 0,5-2 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 40-75 x 4-7,5 µm, 8-spored; spores spindle-shaped, 6-12 x 2-3,5 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding 0-5 µm above the asci; marginal hairs 30-90 µm long; known from deciduous wood . . . . . ***Lachnum brevipilosum***

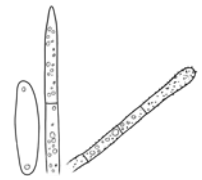


11. Marginal hairs shorter than 70 µm 12
    Marginal hairs longer than 70 µm 14

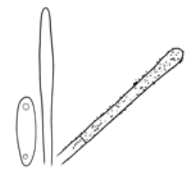
12. Spores 4-5 x 1 µm; on Pinus . . . . . see *Lachnellula pulverulenta*, Jxx
    Spores larger; often on orther hosts 13

13. Marginal hairs 35-45 µm long; spores 7-13 µm long; hymenium pale orange-yellow (). Fruitbody 0,5-3 wide and 2-10 mm high, with a hairy stem; hymenium depressed to flat; asci IKI+ (blue), 50-100 x 4-7 µm, 8-spored, with croziers; spores spindle-shaped to cylindrical, 7-13 x 2-2,5 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding up to 15 µm above the asci; known from coniferous and deciduous wood; rare or overlooked . . . . . ***Lachnum pygmaeum***

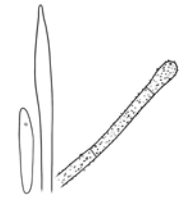




    Marginal hairs 40-70 µm long; spores 5-9 µm long; hymenium white, in old age ± buff-yellow(). Fruitbody 0,5-2,5 wide and 1-3 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 40-63 x 4-7,5 µm, 8-spored, with croziers; spores drop- to spindle-shaped, 5-9 x 1,5-2,3 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding 15-30 µm above the asci; known from exposed wood of deciduous trees, especially *Fagus*, primary during winter; common . . . . . ***Lachnum impudicum***

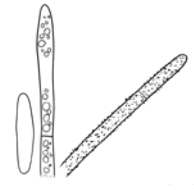


14. Hairs capitate. Fruitbody 0,5 -1,5 mm wide, with a hairy stem; hymenium depressed to flat, whitish; outer surface and margin with hairs; asci IKI+ (blue), 50-65 x 4-6 µm, 8-spored, with croziers; spores spindel-shaped, 6-13 x 1,5-2,2 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 3%; marginal hairs 70-110 µm long; paraphyses protruding 5-30 µm above the asci; known from deciduous wood; rare or overlooked . . . . . ***Lachnum subvirgineum***



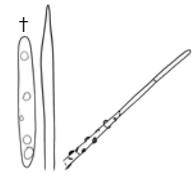


    Hairs cylindrical, also at the tips. Fruitbody 0,5-1,5 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 45-95 x 4,5-6 µm, 8-spored, with croziers; spores spindle-shaped, 6-12 x 1,5-2,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 10-18 µm above the asci; marginal hairs 90-135(160) µm long; known from wood, cupules, cones, leaves, etc. of coniferous and deciduous trees; very common . . . . . ***Lachnum virgineum***



15. Hairs tapering towards the tips . . . . . [*Albotricha, Colipila* p.p.] . . 16
    Hair tips club-shaped or cylindrical . . . . . [*Dacyscyphella* p.p.] . . 18

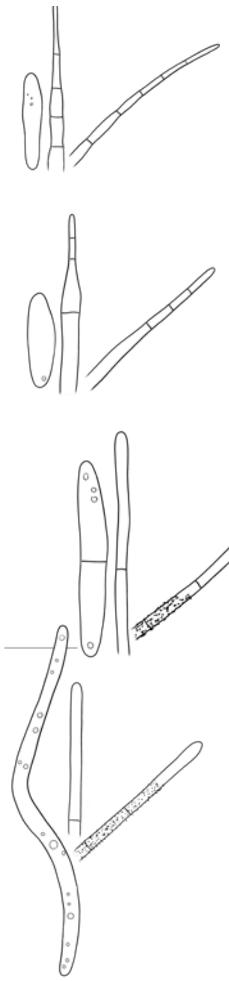
16. Hairs encrusted below. Fruitbody 0,2-1 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci I+, 37-50 x 4-5 µm, 8-spored; croziers ?; spores spindle- to cylindrical to bend-spindle-shaped, 10-20 x 1,5-2 µm, Qav. ≈ 8,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips lance-shaped, with guttules, protruding (?); marginal hairs 110-150 µm long, encrusted; known from a decorticated twig of *Salix*; rare or overlooked . . . . . ***Albotricha laetior***



    Hairs ± smooth 17



17. Living asci 5,5-6 µm wide, dead 4,5-5,3 µm wide; spores 2-2,3 µm wide. Fruitbody 0,3-1 mm wide, with a hairy stem; hymenium depressed, whitish; asci IKIbb (blue), 50-65 x 5-6 µm, 8-spored, with croziers; spores spindle- to drop-shaped, 9-12 x 2-2,5 µm, Qav. ≈ 4,5, smooth, 1-2-celled, oil contents ≈ 0-3%; paraphysis of two types, both short and cylindrical and lance-shaped and protruding; marginal hairs 60-150 µm long, hyaline, smooth or with goo; known from deciduous wood, summer; rare ..... ***Colipila pilatensis***
Living asci 6,7-7,5 µm wide, dead 5,3-6 µm wide; spores 2-3,3 µm wide. Fruitbody 0,3-1 mm wide, with a hairy stem; hymenium depressed, whitish; asci IKIrb (red or blue), 50-65 x 5-6 µm, 8-spored, with croziers; spores spindle- to drop-shaped, 9-12 x 2-2,5 µm, Qav. ≈ 4,5, smooth, 1-2-celled, oil contents ≈ 0-3%; paraphysis tips cylindrical to lance-shaped, protruding 5-18 µm above the asci; marginal hairs 60-150 µm long, hyaline, smooth to with goo; known from wood of *Castanea* and *Quercus*, winter; rare ..... ***Colipila masduguana***



18. Spores longer than 18 µm 19
Spores shorter than 18 µm 20

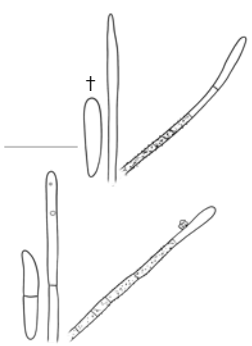
19. Spores 20-25 µm long. Fruitbody 0,5-1,5 wide and 1-2 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 100-116 x 8-10,5 µm, 8-spored, without croziers; spores spindle- to bend-spindle-shaped, 20-25 x 3,5-4 µm, Qav. ≈ 6, smooth, 1-2-celled, oil 3-10%; paraphysis tips lance-shaped, not protruding the asci; marginal hairs 170-220 µm long, encrusted below; known from decaying wood to wood of *Fagus*; rare or overlooked ..... ***Dasyscyphella calongei***
Spores 37-56 µm long. Fruitbody 0,5-1 wide and 0,7-2 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 80-115 x 9,5-11 µm, 8-spored, without croziers; spores thread-shaped, 37-56 x 1,8-2,7 µm, Qav. above 15, smooth, 1-many-celled, oil contents 3-10%; paraphysis tips lance-shaped, not protruding the asci; marginal hairs up to 150 µm long, encrusted below; known from stems of *Chamaedaphne*, *Ledum* and *Vaccinium*; rare or overlooked ..... ***Dasyscyphella cassandrae***



20. Without croziers 21
With croziers 23

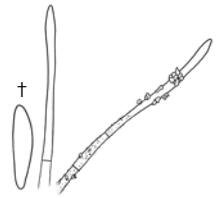
21. Spore Qav. longer than 4,5; upper part of hairs with large, bi-pyramidal crystals. Fruitbody 0,5-1,5 wide and 1,5-2 mm high, with a hairy stem; hymenium depressed, whitish; asci IKI+ (blue), 56-75 x 4,5-6 µm, 8-spored; spores spindle-shaped, 9-13 x 1,5-2,5 µm, Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 15-40 µm above the asci; marginal hairs up to 110 µm long, encrusted below; known from strongly decayed wood *Castanea* and *Quercus*; rare or overlooked ..... ***Dasyscyphella crystallina***
Spore Qav. lower than 4,5; hairs without large crystals 22

22. Hymenium yellowish (). Fruitbody 0,5-2,5 wide and 1-2 mm high, with a hairy stem; hymenium depressed to flat, yellowish; asci IKI+ (blue), 55-75 x 4,5-5,5 µm, 8-spored; spores spindle-shaped, 6,5-11,5 x 2-2,8 µm, Qav. ≈ 4, smooth, 1-celled; paraphysis tips lance-shaped; marginal hairs 80-125 µm long, encrusted below; known from deciduous wood; rare or overlooked ..... ***Dasyscyphella sulphuricola***
Hymenium whitish. Fruitbody 0,5-3 wide and 1-3 mm high, with a hairy stem; hymenium depressed; asci IKI+ (blue), 65-85 x 5,5-6 µm, 8-spored; spores spindle-shaped, 7-13,5 x 2-3,2 µm, Qav. ≈ 4, smooth, 1(2) to 1-2-celled, oil contents ≈ 0%; paraphysis tips lance-shaped to cylindrical; marginal hairs 80-130 µm long, encrusted below; known from decaying wood of *Fraxinus*, *Populus* and *Picea*; rare or overlooked ..... ***Dasyscyphella dryina***





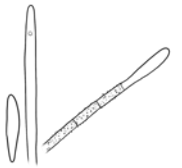
23. On chestnut (*Castanea*) burrs. Fruitbody 0,25-0,4 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 40-55 x 4,5-5,5 µm, 8-spored, with croziers; spores , 8-11 x 1,5-2,5 µm, Qav. ≈ 5, smooth, 1-celled; paraphysis tips lance-shaped, protruding 20-30 µm above the asci; marginal hairs 0-140 µm long, encrusted below; rare or overlooked ..... ***Dasyscyphella castaneicola***
On wood 24



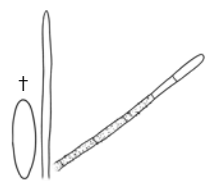
24. Flesh with refractive golden granules or goo; spores 8,5-14 µm long, on average more than 9 µm, bend. Fruitbody 1-3 wide and 2,5-3 mm high, with a hairy stem; hymenium depressed to flat, whitish to yellowish; asci IKI+ (blue), 70-95 x 5,5-7 µm, 8-spored; spores cucumber- to bend-spindle-shaped, 8,5-14 x 2-3 µm, Qav. ≈ 4,5-5,5, smooth, 1-2-celled, oil contents 0-3%; paraphysis tips lance-shaped; marginal hairs 65-110 µm long, encrusted below; known from wood of *Fagus*; rare or overlooked ..... ***Dasyscyphella chrysotexta***
Flesh without such golden inclusions; spores on average less than 9 µm long, not bend 25



25. Upper part of hairs with large crystals; hairs 50-110 µm long. Fruitbody 1-3 wide and 1-3 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 55-80 x 3-6 µm, 8-spored; spores spindle- to bend-spindle-shaped, 5-10 x 1,5-2,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 0-5 µm above the asci; marginal hairs, encrusted below; known from deciduous wood; rare or overlooked ..... ***Dasyscyphella nivea***
Upper part of hairs without large crystals; hairs often longer 26



26. Spores with two drops. Fruitbody 0,5-1,5 wide and 1-3 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 50-65 x 5-6 µm, 8-spored; spores spindle-shaped, 7-9 x 1,6-2 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips lance-shaped; marginal hairs 90-160 µm long, encrusted below; known from deciduous wood; rare or overlooked ..... ***Dasyscyphella pilosissima***
Spores without drops or with many smaller drops 27



27. Hair tips ± cylindrical. Fruitbody 0,5-1 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 50-60 x 5-6 µm, 8-spored; spores spindle-shaped, 7,5-9 x 2-3 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 8-12 µm above the asci; marginal hairs 95-180 µm long, encrusted below; known from coniferous and deciduous wood; rare or overlooked ..... ***Dasyscyphella angustipila***[13]
Hair tips clavate. Fruitbody 0,5-1 wide and 1-2 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 55-70 x 4,5-6 µm, 8-spored; spores spindle-shaped, 5-9 x 1,8-2,2 µm, Qav. ≈ 3,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding 10-18 µm above the asci; marginal hairs 80-130 µm long, encrusted below; known from coniferous and deciduous wood; rare or overlooked ..... ***Dasyscyphella montana***[14]



. . . .

29. On leaves or bud-scales of broadleaved trees 30
On conifer cones, needles, ferns or herbs (including *Rubus* and monocots) 43

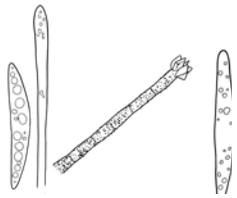
30. On leaves of *Vaccinium* 31
On leaves of trees 33

13. According to Baral = *Dasyscyphella montana*.

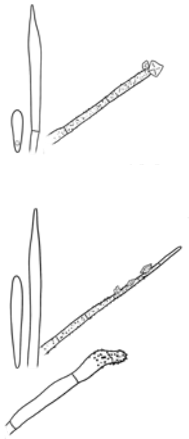
14. *Dasyscyphella callunae* nom. prov. on *Calluna vulgaris* is very similar, but with wider spores (6,5-14 x 2,5-4 µm).



31. Spores 12-19,5 µm long; ascus top red (IKIrr) in lugol. Fruitbody 0,2-0,5 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci 60-80 x 7- 8 µm, 8-spored, without croziers; spores spindle- to bend-spindle-shaped, 12-19,5 x 2,2-3,5 µm, Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 50%; paraphysis tips lance-shaped, protruding above the asci; marginal hairs 70-200 µm long, encrusted and with a crown of bi-pyramidal crystals; known from leaves of *Vaccinium myrtillus* and *Vaccinium uliginosum*; rare or overlooked ***Incrucipulum virtembergense***
Spores less than 13,5 µm long; apical apparatus blue (IKIbb) in lugol 31



31. Spores 4-6,5 µm long. Fruitbody 0,2-0,6 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 33-41 x 4,2-5 µm, 8-spored, without croziers; spores drop-shaped, 4-6,5 x 1,2-1,5 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 20-25 µm above the asci; marginal hairs 55-65 µm long, hyaline, encrusted and with apical crystals; known from leaves of *Vaccinium myrtillus* and *Vaccinium vitis-idaea*; rare or overlooked ***Lachnum microsporum***
Spores 8-13,5 µm long. Fruitbody 0,3-0,8 mm wide, with a hairy stem; hymenium depressed, whitish, possibly with a yellowish sheen; asci IKI+ (blue), 42-45 x 4,5-5,5 µm, 8-spored, without croziers; spores spindle- to drop-shaped, 8-13,5 x 1,3-2 µm, Qav. ≈ 6,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding 15-20 µm above the asci; marginal hairs 70-120 µm long, encrusted and with some larger crystals; known from *Vaccinium uliginosum*; rare or overlooked ***Dasyscyphella albocitrina***

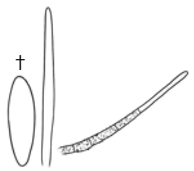


33. Hairs clavate with broad, blunt, warty tips; mature spores 4-celled
see *Cistella tenuicula*, Xxx
Hairs cylindrical to tapering without warty tips; spores 1-celled 34

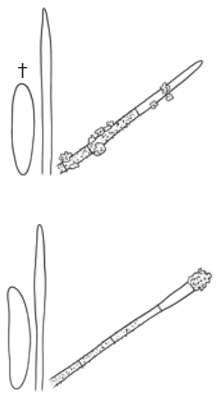
34. Hairs with smooth tips but often with some large crystals 35
Hairs finely encrusted to the tip and often also with large crystals 38

35. With obvious, oblong VBs in paraphyses and hairs; on leaves and bud-scales of *Populus* see *Gemmina gemmarum*, Cx
Without oblong VBs; on other substrates 36

36. Upper part of hairs without large crystals. Fruitbody 0,5-1 wide and 1-1,5 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 40-55 x 3,5-5 µm, 4-spored, with croziers; spores spindle-shaped, 8-13 x 2-3 µm, Qav. ≈ 4, smooth, 1-celled; paraphysis tips lance-shaped, protruding 10 µm above the asci; marginal hairs 60-70 µm long, encrusted below; known from leaves of *Quercus faginea*; rare or overlooked ***Dasyscyphella patuloides***
Upper part of hairs with large crystals 37



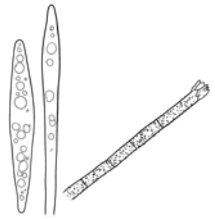
37. End cell ± ⅓ length of the hair. Fruitbody 0,2-0,5 wide and 1-1,5 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 45-55 x 4,5-5,5 µm, 8-spored, with croziers; spores spindle-shaped, 8,5-13 x 1,3-2 µm, Qav. ≈ 5, smooth, 1-celled; paraphysis tips lance-shaped, protruding 10-20 µm above the asci; marginal hairs 80-100 µm long, encrusted below; known from leaves of *Quercus faginea* and *Q. rotundifolia*; rare or overlooked ***Dasyscyphella tamajonica***
End cell relatively shorter. Fruitbody 0,3-1 mm wide, with a hairy stem; hymenium depressed, whitish; asci IKI+ (blue), 60-75 x 6-7 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 7-16 x 2-3 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 15 µm above the asci; marginal hairs 100-150 µm long, encrusted below; known from leaves of *Quercus canadensis*, *Q. robur* and *Q. rotundifolia*; rare or overlooked ***Dasyscyphella claviculata***



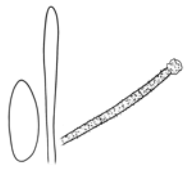


38. Spores 16-26 µm long 39
Spores shorter 40

39. Spores 1-celled; apical apparatus red (IKIrb) in lugol. Fruitbody 0,2-0,5 mm wide, with a hairy stem; hymenium depressed to flat, whitish to yellowish; asci 55-75 x 5-8,5 µm, 8-spored, without croziers; spores spindle-shaped, 16-26 x 2,2-3 µm, Qav. ≈ 8, smooth, oil contents ≈ 50-80%; paraphysis tips lance-shaped, protruding above the asci; marginal hairs 55-135 µm long, encrusted and with an crown of bi-pyramidal, sometimes yellowish crystals; known from leaves of *Castanea* and *Quercus*; rare or overlooked ***Incrucipulum ciliare***
Spores 4-celled; apical apparatus blue (IKIbb) in lugol. Fruitbody 0,5-1 mm wide, sessile; hymenium depressed, buffish; asci 65-75 x 7-8 µm, 8-spored, without croziers; spores spindle-shaped, 17,5-25 x 2,5-3,2 µm, Qav. ≈ 8, smooth, oil contents ≈ 0-3%; paraphysis tips lance-shaped, with guttules, protruding 20-25 µm above the asci; marginal hairs 140-190 µm long, hyaline, encrusted, especially at the tip, base turning lilac in KOH; on dead leaves of *Quercus ilex*; spring; rare or overlooked ***Belonidium aeruginosum***



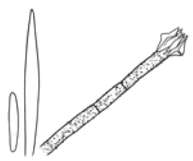
40. Spores 2,5-4 µm wide, Qav ca. 3. Fruitbody 0,2-0,7 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci 50-70 x 6,5-9 µm, 8-spored, without croziers; spores spindle-shaped, 7-12 x 2,5-4 µm, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding above the asci; marginal hairs 40-70 µm long, encrusted and sometimes with larger crystals; known from leaves of *Carpinus* and *Quercus faginea*; rare or overlooked ***Lachnum trapeziforme***
Spores 0,8-2,5 µm wide, Qav. higher than 3 41



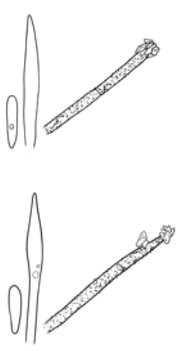
41. Spores 2-2,5 µm wide; Qav. ca. 3,5; hairs 90-190 µm long
see *Lachnum patulum*, Jxx
Spores 0,8-2 µm wide; Qav. 4,5-5; hairs shorter 42



42. Hairs with a persistent crown of large bi-pyramidal crystals. Fruitbody 0,2-0,6 mm wide, with a hairy stem; hymenium flat, whitish; asci 30-45 x 4-5 µm, 8-spored, without croziers; spores drop-shaped, 5-8 x 0,8-1,8 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips lance-shaped, protruding up to 20 µm above the asci; marginal hairs 45-100 µm long, encrusted and with a crown of bi-pyramidal crystals; known from leaves of *Quercus petraea*, *Quercus robur*; rare or overlooked ***Incrucipulum capitatum***
Hairs with large but loosely attached crystals 42



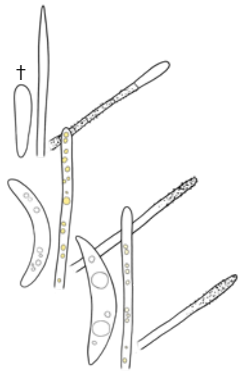
42. Without croziers. Fruitbody 0,3-0,8 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci 30-45 µm, 8-spored; spores spindle- to drop-shaped, 4-8 x 1,3-1,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding above the asci; marginal hairs 50-100 µm long, encrusted and with a crown of crystals; known from leaves of *Acer* and *Quercus*; rare or overlooked ***Lachnum rhytismatis***
With croziers. Fruitbody 0,2-0,8 mm wide, with a hairy stem; hymenium depressed to flat; asci 30-45 x 4-5,5 µm, 8-spored; spores ± drop-shaped, 4-8 x 1,3-1,5 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, with VBs, protruding 20 µm above the asci; marginal hairs 35-65 µm long, encrusted and with a crown of crystals; known from dead leaves of *Acer, Fagus, Quercus petraea* and *Quercus robur*; rare or overlooked ***Lachnum aceriphilum***

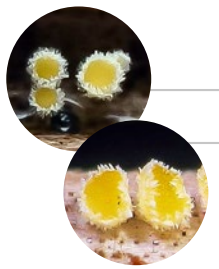


43. On conifer cones or needles 44
On ferns or herbs (including *Rubus* and monocots) 50

44. On conifer cones 45
On conifer needles 46

45. With croziers; asci 50-80 µm long ..... see *Lachnum papyraceum*, cpl. xx
Without croziers, asci 30-40 µm long. Fruitbody 0,2 - 0,5 mm wide, with a hairy stem; hymenium depressed, whitish; asci IKI+ (blue), 8-spored, without croziers; spores spindle- to drop-shaped, 6-10 x 1,5-2,5 µm, Qav. ≈ 4, smooth, 1-celled; paraphysis tips lance-shaped; marginal hairs 50-70 µm long, encrusted below; on cones of *Picea* and *Pinus*; rare or overlooked ..... ***Dasyscyphella conicola***



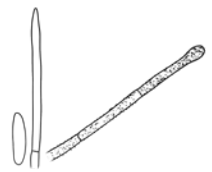


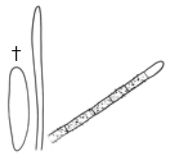
46. Spores strongly bend, longer than 10,5 µm ..... [*Erioscyphella*] 47
Spores straight or slightly bend, shorter than 10,5 µm 48

47. Spores 1,5-2,5 µm wide, mostly with slightly rounded ends; asci 45-65 µm long ..... see *Erioscyphella curvispora*, Jxx
Spores 2,5-3,5 µm wide, with acute ends; asci 60-100 µm long ..... see *Erioscyphella lunata*, Jxx

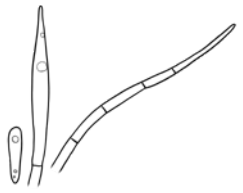
48. On needles of *Juniperus*; hairs 10-25 µm long ..... see *Gemmina junipericola* Cx
On other substrates; hairs much longer 49

49. Outer surface and hairs whitish but yellowing or reddening (→) when bruised or drying; hairs 60-80 µm long. Fruitbody 0,2-0,5 wide and 1-1,5 mm high, with a hairy stem; hymenium depressed to flat; asci IKI+ (blue), 35-45 x 4-5,5 µm, 8-spored, with croziers; spores spindle-shaped, 5-8 x 1,5-2 µm, Qav. ≈ 3,5, smooth, 1-2-celled, oil contents 0-3%; paraphysis tips lance-shaped; marginal hairs encrusted below; known from needles of *Pinus*; rare or overlooked ..... ***Lachnellula pulverulenta***
Outer surface and hairs persistently pale yellowish; hairs 80-110 µm long. Fruitbody 0,4-1 mm wide, with a hairy stem; hymenium depressed to flat; asci IKI+ (blue), 50-60 x 4,5-5 µm, 8-spored, with croziers; spores spindle-shaped, 8,5-11 x 2-3 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding 5 µm above the asci; marginal hairs encrusted below; known from needles of *Pinus cembra* and *Pinus mugo*; rare or overlooked ..... ***Dasyscyphella mughonicola***





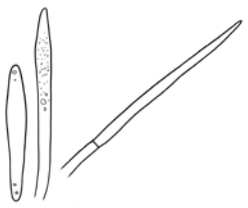
50. On ferns. Fruitbody 0,1-0,5 mm wide; hymenium depressed to flat, whitish; asci IKIrb (red, blue after pretreatment), 27-35 x 4-6 µm, 8-spored; spores drop- to spindle-shaped, 5-8 x 0,7-1,5 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, with guttules, protruding 20 µm above the asci; marginal hairs 70-90 µm long, encrusted; known from dead stems and leaves of *Dryopteris* and *Pteridium aquilinum*; rare or overlooked ..... ***Albotricha washingtonensis***
On mono- or dicot herbs (including *Rubus*) 51



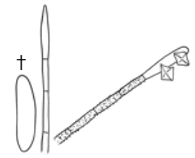
51. On dicot herbs 53
On monocot herbs 58



52. Fruitbodies 1-3,5 mm wide, ± sessile; outer surface with projecting, 100-300 µm long hairs; apical apparatus red in lugol (IKIrb). Hymenium depressed, whitish; asci 50-75 x 4,5-6,5 µm, 8-spored, with croziers; spores spindle-shaped, 8-20 x 1,5-2,5 µm, Qav. ≈ 7, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding 5-20 µm above the asci; marginal hairs 100-200 (-300) µm long, pale yellow, ± encrusted, sometimes woth goo; known from dead stems of larger dicot herbs; rare or overlooked ..... ***Trichopeziza mollissima***
Fruitbodies smaller, ± stipitate; hairs shorter and more neat; apical apparatus blue (IKIbb) in lugol 53



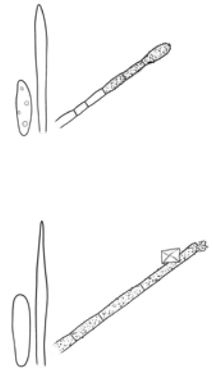
53. Hairs with a smooth top but possibly with crystals; on *Rubus*. Fruitbody 0,5-1 wide and 1-2 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci 45-55 x 4-5,5 µm, 8-spored, without croziers; spores spindle- to drop-shaped, 7-10 x 1,5-2 µm, Qav. ≈ 5, smooth, 1-celled, oil contents 0-3%; paraphysis tips lance-shaped, protruding 15-30 µm above the asci; marginal hairs 60-110 µm long, hyaline, encrusted below; known from dead stems of *Rubus idaeus*; rare or overlooked ..... ***Dasyscyphella rubi***
Hairs encrusted to the top; on other hosts 54



54. Asci without croziers 55
Asci with croziers 56



55. Almost sessile; outer surface and hairs reddening (→) when bruised and with age. Fruitbody 0,7-1,2 mm wide; hymenium depressed to flat, first whitish; asci 35-55 x 3-6 µm, 8-spored; spores ellipsoid, drop-shaped to spindle-shaped, 5-8 x 1,4-1,7 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding 8-15 µm above the asci; marginal hairs 50-70 µm long, hyaline, encrusted and with large apical crystals; known from stems of *Polygonatum*; rare or overlooked ..... ***Lachnum eburneum***
With a hairy stem; not reddening. Fruitbody 0,4-1,3 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci 39-45 x 4,5-6 µm, 8-spored; spores spindle- to drop-shaped, 6-10,5 x 1,5-2,1 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 8-15 µm above the asci; marginal hairs 60-85 µm long, hyaline, encrusted and with large apical crystals; known from stems of *Adenostylus, Arctium, Aruncus dioicus, Epilobium, Filipendula, Rubus* and *Senecio*; common ..... ***Lachnum clavigerum* s.l.**



56. Spores with 25-50% oil contents; paraphyses 2-4 µm wide; on *Lythrum salicaria*. Fruitbody 0,5-3 wide and 2-6 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci 40-53 x 4-5 µm, 8-spored; spores spindle-shaped, 6-9,2 x 1,2-1,8 µm, Qav. ≈ 5, smooth, 1-celled; paraphysis tips lance-shaped, protruding 5-10 µm above the asci; marginal hairs 40-55 µm long, encrusted; rare or overlooked ..... ***Lachnum salicariae***
Spores with 0-3% oil contents; paraphyses mostly wider; on other hosts 57



57. Spores 1,2-1,5 µm wide.Fruitbody 0,8-1 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci 40-50 µm, 8-spored, with croziers; spores spindle- to drop-shaped, 6-11 x 1,2-1,5 µm, Qav. ≈ 6,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding 20-30 µm above the asci; marginal hairs 75-85 µm long, encrusted and with larger apical crystals; known from *Filipendula* and *Senecio*; rare or overlooked ..... ***Lachnum morthieri***
Spores 1,7-2,5 µm wide. Fruitbody 0,7-2,2 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci 65-80 µm, 8-spored; spores spindle-shaped, 9-15 x 1,7-2,5 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped, protruding 20-30 µm above the asci; marginal hairs 60-90 µm long, encrusted and with larger apical crystals; known from *Chamerion* and *Filipendula*; common ..... ***Lachnum nudipes***





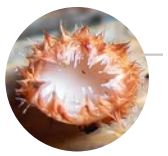
Host list of *Albotricha*, *Lachnum* and *Dasyscyphella* species on monocots:

Grasses

Agrostis	*Lachnum clavisporum, L. tenuipilosum*
Ammophila	*Lachnum carneolum*
Arrhenaterum	*Lachnum pudicellum*
Brachypodium	*Lachnum pudicellum, L. tenuipilosum*
Bromus	*Lachnum carneolum, L. pudicellum*
Calamagrostis	*Albotricha albotestacea, Lachnum pudicellum, L. tenuipilosum*
Glyceria	*Albotricha acutipila*
Lolium	*Lachnum pudicellum*
Milium	*Lachnum pudicellumm, L. tenuipilosum*
Molinia	*Lachnum carneolum, L. clavisporum, L. pudicellum, L. sesleriae,L. tenuipilosum*
Nardus stricta	*Lachnum roseum*
Phalaris	*Albotricha albotestacea, Lachnum tenuipilosum*
Phragmites	*Albotricha albotestacea, A. acutipila, Lachnum controversum, L. pudicellum, L. tenuipilosum, L. winteri*
Sesleria	*Lachnum sesleriae*
Triticum	*Lachnum pudicellum*
On various grasses	*Dasyscyphella graminicola, Lachnum elatius*

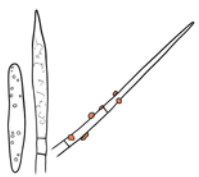
Other monocots

Carex	*Dasyscyphella norgevica, Lachnum callimorphum, L. caricis, L. juncinum, L. roseum, L. tenue*
Cladium mariscus	*Lachnum juncinum*
Epilobium angustifolium	*Dasyscyphella epilobii*
Eriophorum	*Lachnum imbecille, L. juncinum*
Juncus	*Albotricha acutipila, Lachnum apalum, L. caricis, L. clavisporum, L. juncinum, L. tenue,L. diminutum, L. roseum*
Schoenoplectus	*Lachnum schoenoplecti*
Scirpus holoschoenus	*Dasyscyphella scirpicola, Lachnum luteodiscum*
Trichophorum cespitosum	*Lachnum roseum*



58. Hairs ± coral ( ) from the start; with a shaggy appearance. Fruitbody 0,5-1,3 mm wide, sessile; hymenium depressed, whitish; asci IKI+ (blue), 55-75 x 5,5-6 µm, 8-spored, without croziers; spores spindle- to bend-spindle-shaped, 7-15 x 1,5-2,2 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips lance-shaped, protruding 15-30 µm above the asci; marginal hairs 100-225 µm long, tapering and acute, with pale coral encrustations; known from grasses to dead stems of *Calamagrostis, Phalaris* and *Phragmites*; spring–summer; rare or overlooked ***Albotricha albotestacea***[15]

Hairs ± white, sometimes reddening (→); mostly more well-groomed 59

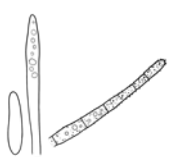


59. Asci with croziers 60

Asci without croziers 65

60. Spores 5-9,5 µm long. Fruitbody 0,6-1,5 mm wide, with a hairy stem; hymenium depressed to flat, whitishs; asci IKI+ (blue), 40-52 x 4-5,5 µm, 8-spored; spores spindle-shaped, 5-9,5 x 1-2 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 0-3%; paraphysis tips lance-shaped, protruding -15 µm above the asci; marginal hairs 40-90 µm long, encrusted; known from grasses, e.g. *Ammophila*, *Bromus* and *Molinia*; rare or overlooked ***Lachnum carneolum***

Spores longer 61



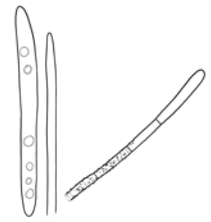
15. Some authors separates *Albotricha winteri* ss. Šandová by its more yellow-orange colours. It is described form *Phragmites*.

61. Spores longer than 22 µm 62

Spores shorter than 22 µm 63

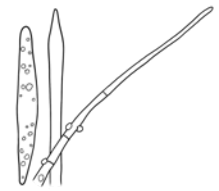
62. Spores 23-28 µm long. Fruitbody 0,3-0,5 wide and 0,5-1,5 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 85-100 x 6-8 µm, 8-spored; spores cylindrical to cucumber-shaped, 23-28 x 2-2,5 µm, Qav. ≈ 11,5, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips lance-shaped; marginal hairs 70-80 µm long, encrusted; known from *Scirpus holoschoenus*; rare or overlooked ***Dasyscyphella scirpicola***

Spores 32-50 µm long see *Lasiomollisia phalaridis*, page xxx



63. Hairs with smooth, tapering and acute tips. Fruitbody 0,5-0,8 wide and 0,5-1 mm high, with a hairy stem; hymenium depressed to flat, whitish to yellowish; asci IKIrr (red after pretreatment) or IKIbb, 60-85 x 5-9 µm, 8-spored, with croziers; spores spindle- to bend-spindle-shaped, 12-22 x 1,5-3,5 µm, Qav. ≈ 7, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips lance-shaped, protruding 10-21 µm above the asci; marginal hairs 100-200 µm long, tapering and acute, with scattered encrustations; known from of grasses; rare or overlooked ***Lachnum caducum***

hairs encrusted to the ± cylindrical tips 64



64. Hairs encrusted and also with large crystals; fruitbodies persistently white to rose. Fruitbody 0,2-1 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 50-60 x 5 µm, 8-spored; spores spindle-shaped, 10-18,5 x 2-2,5 µm, Qav. ≈ 6,5, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips lance-shaped, with guttules, protruding about 20-25 µm above the asci; marginal hairs 100-140 µm long; known fromvarious monocots, e.g. grasses, *Carex ferruginea*, *Juncus trifidus*, *Nardus stricta* and *Trichophorum cespitosum*; rare or overlooked ***Lachnum roseu***m

Hairs only encrusted; fruitbodies white, but reddening (→) when bruised or drying. Fruitbody 0,3-1 wide and 1-2 mm high, with a hairy stem; hymenium depressed to flat; asci IKI+ (blue), 35-65 x 4-6 µm, 8-spored; spores spindle-shaped, 7-15 x 1-2,5 µm, Qav. ≈ 6,5, smooth, 1-celled, oil contents ≈ 0-10%; paraphysis tips lance-shaped, protruding 10-25 µm above the asci, with VBs; marginal hairs 60-120 µm long, hyaline, encrusted, with VBs; known from *Carex*, *Juncus* and various grasses; rare or overlooked ***Lachnum tenuipilosum* s.l.**[16]



65. Hairs with a smooth top, but possibly with some larger crystals 66

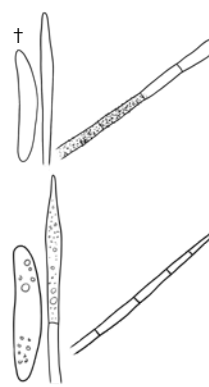
Hairs encrusted to the top, and possibly with some larger crystals 69

66. Spores longer than 10 µm; hairs without large crystals 67

Spores shorter than 10 µm; hairs with some larger crystals 68

67. Hairs shorter than 90 µm, cylindrical with a blunt tip. Fruitbody 0,2-0,5 wide and 0,5-0,8 mm, with a hairy stem; hymenium depressed to flat, whitish to buffis; asci IKI+ (blue), 40-50 x 4-5 µm, 8-spored; spores bend-spindle-shaped, 12-15 x 1,5-2 µm, Qav. ≈ 7,5, smooth, 1-celled; paraphysis tips lance-shaped; marginal hairs 60-80 µm long, encrusted below; known from *Carex*; rare or overlooked ***Dasyscyphella norvegica***

Hairs longer than 90 µm; tapering and acute. Fruitbody 0,3-1 mm wide, with a hairy stem; hymenium depressed to flat, whitish to very pale orange; asci IKI+ (blue), 45-65 x 4-6,5 µm, 8-spored; spores spindle- to bend-spindle-shaped, 10-19 x 1,5-2,2 µm, Qav. ≈ 8, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips lance-shaped, protruding 15-20 µm above the asci; marginal hairs 115-150 µm long, hyaline, warty below, with goo; known from *Glyceria, Phragmites* and *Juncus*; spring–summer; rare or overlooked ***Albotricha acutipila***

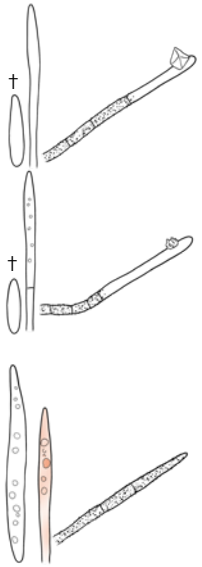


16. *Lachnum tenuipilosum* constitute a species complex with several undescribed species.

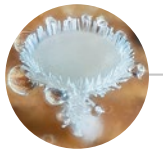
68. On *Epilobium*. Fruitbody 0,2-0,5 wide and 0,3-0,8 mm high, with a hairy stem; hymenium depressed, whitish; asci IKI+ (blue), 38-43 x 4-5 µm, 8-spored; spores spindle- ot drop-shaped, 7-9,5 x 1,3-1,6 µm, Qav. ≈ 5,5, smooth, 1-celled; paraphysis tips lance-shaped, protruding 10 µm above the asci; marginal hairs 50-80 µm long, encrusted below; rare or overlooked ... ***Dasyscyphella epilobii***
On grasses. Fruitbody 0,2-0,5 wide and 0,5-1 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 35-45 x 3-4 µm, 8-spored; spores spindle-shaped, 5,5-7 x 1,3-1,8 µm, Qav. ≈ 4, smooth, 1-celled; paraphysis tips lance-shaped, protruding 15 µm above the asci; marginal hairs 50-60 µm long, encrusted below; rare or overlooked ... ***Dasyscyphella graminicola***



69. On *Eriophorum*; hymenium pale apricot-orange. Fruitbody 0,3-0,6 wide and 0,3-1 mm high, almost sessile; hymenium flat; asci IKI+ (blue), 62-83 x 6,5-7,5 µm, 8-spored, without croziers; spores spindle-shaped, 14,5-30 x 2,3-2,7 µm, Qav. ≈ 9, smooth, 1-celled, oil contents ≈ 10-25%; paraphysis tips lance-shaped, protruding 10-20 µm above the asci; marginal hairs 50-80 µm long, encrusted; rare or overlooked ... ***Lachnum imbecille***
On other hosts *and/or* with other colours ... 70



70. Outer surface, hairs and hymenium persistently whitish (); paraphyses without VBs ... 71
Outer surface, hairs or hymenium either from the start, by bruising or age reddish, orange or yellowish (→); paraphyses with VBs ... 74

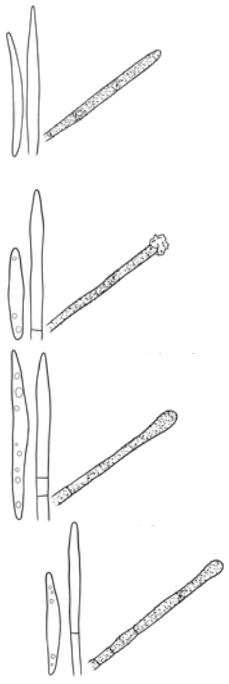


71. On grasses ... 72
On other hosts ... 73

72. Paraphyses 2-4 µm wide, 0-15 protruding above the asci. Fruitbody 0,8-1,2 mm wide, with a hairy stem; hymenium depressed to flat, whitish to yellowish, 45-60 x 4,5-6 µm, 8-spored; spores bend-spindle-shaped, 9-18 x 1,2-2 µm, Qav. ≈ 8,5, smooth, 1-celled, oil contents ≈ 0%; paraphysis tips lance-shaped; marginal hairs 60-90 µm long, encrusted; known from *Molinia coerulea* and *Sesleria calcaria*; rare or overlooked ... ***Lachnum sesleriae***
Parathyses 4-6,5 µm wide, 9-25 µm protruding. Fruitbody 0,3-1,8 wide and 2-4 mm, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 50-75 x 3,5-6,5 µm, 8-spored; spores spindle- to drop-shaped, 7-15 x 1,5-2,2 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 3-6,5 to 0-3%; paraphysis tips lance-shaped; marginal hairs 55-75 µm long, encrusted and possibly with some larger crystals; known from various grasses; rare or overlooked ... ***Lachnum elatius***

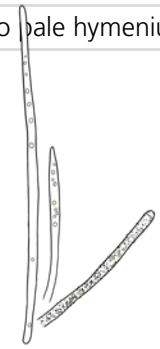


73. Spores on average longer than 15 µm; on *Schoenoplectus*. Fruitbody 0,3-1 wide and 0,5-2 mm high, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 55-75 x 5,5-6,7 µm, 8-spored; spores , 12-27 x 1,6-2,3 µm, Qav. ≈ 10, smooth, 1-celled, oil contents ≈ 10%; paraphysis tips lance-shaped, protruding 10-30 µm above the asci; marginal hairs 45-85 µm long, encrusted; rare or overlooked ... ***Lachnum schoenoplecti***
Spores on average shorter than 15 µm; on *Carex* and *Juncus*. Fruitbody 0,2-0,5 wide and 0,5-1 mm high, with a hairy stem; hymenium depressed to flat, whitish, 40-55 x 4,5-5 µm, 8-spored; spores , 7-15 x 1-1,3 µm, Qav. ≈ 9,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding 15-30 µm above the asci; marginal hairs 45-90 µm long, encrusted; rare or overlooked ... ***Lachnum tenue***

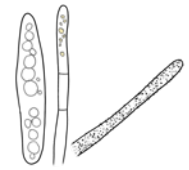




74. Spores 35-50 µm long. Fruitbody 0,3-1 mm wide, with a hairy stem; hymenium depressed to flat, whitish, reddening; asci IKI+ (blue), 65-95 x 6-9,5 µm, 8-spored; spores thread-shaped, 35-50 x 1,5-1,8 µm, Qav. ≈ 26, smooth, 1-celled, oil contents ≈ 80 to 50%; paraphysis tips lance-shaped, protruding 8-20 µm above the asci; marginal hairs 60-80 µm long, encrusted; known from *Juncus* especially *J. effusus*; common ... ***Lachnum apalum***
Spores shorter ... 75

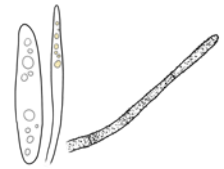


75. Apical apparatus red with lugol (IKIrr or IKIrb); on *Scirpus*. Fruitbody 0,3-1 mm wide; hymenium flat, pale yllowish; asci 55-80 x 6-10 µm, 8-spored; spores spindle-shaped, 15-21 x 3-4 µm, Qav. ≈ 5, smooth, 1-celled, oil contents ≈ 50-80%, sometimes with a surrounding slime coating; paraphysis tips lance-shaped, protruding 10-24 µm above the asci; marginal hairs 40-50 µm long, encrusted; known from overwintered flower stalks of *Scirpus lacustris*; rare or overlooked ... ***Lachnum luteodiscum***
Apical apparatus blue with lugol (IKIbb) ... 76

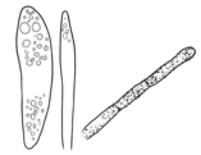




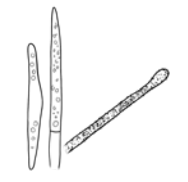
76. Hymenium clear yellow from the start or with age. Fruitbody 0,2-1 wide and 1-2 mm, with a hairy stem; hymenium flat; asci IKI+ (blue), 60-100 x 6-9,5 µm, 8-spored; spores spindle-shaped, 12-21 x 2-3,5 µm, Qav. ≈ 6, smooth, 1-celled, oil contents ≈ 65-80 to 50%, sometimes with a 1-ended to surrounding slime coating; paraphysis tips lance-shaped, protruding 20-30 µm above the asci; marginal hairs 40-80 µm long, encrusted; known from *Cladium, Eriophorum, Juncus* and *Carex*; rare or overlooked ... ***Lachnum juncinum***[17]
Hymenium whitish ... 77



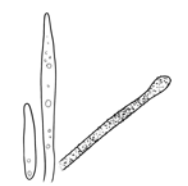
77. Spores 4-5 µm wide. Fruitbody 0,2-0,5 mm wide, with a hairy stem; hymenium depressed to flat, whitish; asci IKI+ (blue), 60-100 x 8-10 µm, 8-spored; spores broadly drop-shaped, 15-20 x 4-5 µm, Qav. ≈ 4, smooth, 1-celled, with a 1-ended slime coating; paraphysis tips lance-shaped; marginal hairs 55-65 µm long, encrusted; known from grasses and rushes, e.g. *Agrostis, Molinia* and *Juncus*; rare or overlooked ... ***Lachnum clavisporum***
Spores up to 2,5 µm wide ... 78



78. Spores with 40-60% oil contents. Fruitbody 0,3-1 mm wide, with a hairy stem; hymenium flat, whitish to yellowish to buffish; asci IKI+ (blue), 45-68 x 5,5-7 µm, 8-spored; spores spindle- to bend-spindle-shaped, 9-21 x 1,5-2 µm, Qav. ≈ 8,5, smooth, 1-celled, oil contents ≈ 50%; paraphysis tips lance-shaped, protruding up to 15 µm above the asci; marginal hairs 30-45 µm long, encrusted; known from dead stems of *Juncus*; rare or overlooked ... ***Lachnum diminutum***
Spores with 0-10 % oil contents ... 79



79. On *Carex* and *Juncus*. Fruitbody 0,2-0,6 mm wide, with a hairy stem; hymenium flat, whitish; asci IKI+ (blue), 35-50 x 4,5-5,5 µm, 8-spored, without croziers; spores spindle-shaped, 7-14 x 1,3-2 µm, Qav. ≈ 6,5, smooth, 1-celled, oil contents ≈ 3-10%; paraphysis tips lance-shaped, protruding 10-15 µm above the asci; marginal hairs 35-60 µm long, encrusted; rare or overlooked ... ***Lachnum caricis***
On grasses ... 80

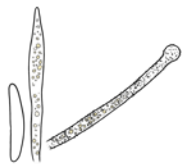


17. *Lachnum callimorphum*, with drop-shaped, 15-20 x 1,5-2 µm large spores, also grows on *Carex*, but a modern character set is missing.

key K – hairy discs with whitish hairs and white to pale hymenium 233



80. Hair tips inflated to subcapitate. Fruitbody 1-2-1 wide and 2,5 mm high, with a hairy stem; hymenium flat, whitish; asci IKI+ (blue), 30-45 x 4,5-5 µm, 8-spored; spores spindle-shaped, 6-12 x 1,2-2 µm, Qav. ≈ 5,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding up to 20 µm above the asci; marginal hairs 30-75 µm long, encrusted; known from grasses, e.g. *Arrhenaterum, Brachypodium, Bromus, Calamagrostis, Lolium, Milium, Molinia, Phragmites* and *Triticum*; rare or overlooked ..... ***Lachnum pudicellum***



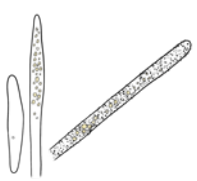
Hair tips cylindrical 81



71. Spores 1,8-2,2 µm wide; outer surface, hairs and hymenium whitish but reddening (→) when bruised or with age. Fruitbody 0,8-2 mm wide, with a hairy stem; hymenium ± flat, whitish; asci IKI+ (blue), 45-55 x 5,5-6,5 µm, 8-spored, without croziers; spores ellipsoid to spindle-shaped, 6-10 x 1,8-2,2 µm, Qav. ≈ 4, smooth, 1-celled, oil contents ≈ 3%; paraphysis tips lance-shaped, protruding 2-15 µm above the asci; marginal hairs 60-80 µm long, encrusted; known from large grasses especially *Phragmites*; common ..... ***Lachnum controversum***



Spores 2-3 µm wide; fruitbodies whitish but yellowing when bruised or with age. Fruitbody 0,3-1 mm wide, with a hairy stem; hymenium ± flat, whitish to yellowish; asci IKI+ (blue), 8-spored; spores spidle-shaped, 7,5-15 x 2-3 µm, Qav. ≈ 4,5, smooth, 1-celled, oil contents ≈ 3%; paraphysis sometimes with yellow VBs, tips flame- to lance-shaped, protruding 15-20 µm above the asci; marginal hairs 40-80 µm long, hyaline to pale yellow, encrusted; known from dead stems of *Phragmites*; rare or overlooked ..... ***Lachnum winteri***



Calyptellopsis/Bryoscyphus polytrichi?