



*Synoptic keys to the inoperculate stromatic discomycetes in the Nordic countries*

## Sclerotiniaceae & Rutstroemiaceae

by [Trond Schumacher](#) and [Arne Holst-Jensen](#)

The key is an extended and revised version of a printed key to the family Sclerotiniaceae (Schumacher, [1997](#)). The preparation of keys for internet publication is done by Arne Holst-Jensen.

**Last update: February 16th. 1998.** First release: September 24th. 1997. This page is maintained by Arne Holst-Jensen ([arne.holst-jensen@vetinst.no](mailto:arne.holst-jensen@vetinst.no)). Please send us a note if you find errors, if you have update information, or just used the key and wanted to tell us that it was useful.

[About the synoptic keys](#)

[About the taxa Sclerotiniaceae and Rutstroemiaceae](#)

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### About the synoptic keys

[Purpose of the keys.](#)

[How to use and interpret the keys.](#)

Direct links to the keys:

[KEY A](#) (substrate)

[KEY B](#) (morphology, **currently unavailable**)

[KEY C](#) (host, **currently unavailable**).

#### Purpose:

The keys include updated information about the inoperculate stromatic discomycetes of the families Sclerotiniaceae and Rutstroemiaceae, known to occur in the Nordic Countries (Denmark, Finland, Norway and Sweden). The generic concepts as presented here, are not always in accordance with the concepts found in current taxonomic literature (e.g., the Dictionary of the Fungi, Systema Ascomycetum). Only characters important for discrimination of the pertinent Nordic taxa have been included; it is not our intention to provide characters and keys to

discriminate all world taxa of the families. The keys are based on a combination of scientific evidence and the authors' subjective opinion about the taxa. In several cases we have indicated that a taxon is misplaced in a genus. However, in the lack of concluding evidence about "correct" positions, the taxon has been retained in its traditional genus. The provided keys will continuously be updated by us; be sure that you use the latest version available (preferably avoid printing it out; the advantages of the electronic media such as clicking text, using links, viewing color photographs etc. will then be lost).

### Using and interpreting the keys:

For identification work you can use one out of three alternative keys:

[KEY A](#) = Key to genera based on type of substrate, host and morphology

[KEY B](#) = Key to genera based on morphological criteria (*currently unavailable* )

[KEY C](#) = Key to taxa based on host association(s) (*currently unavailable* )

If you are familiar with the morphological terms of the non-lichenized inoperculate discomycetes, try [KEY B](#). If the fungal host has been identified, try [KEY C](#), otherwise try the main [KEY A](#).

Various symbols are used to indicate the taxonomic status of the taxa. Taxon names in **bold italics** are accepted (by us) names. Taxon names in quotation marks, e.g. "**Poculum**" **sydowianum**, mean that the taxon has been studied by us, but we are still uncertain about its generic placement. Taxon names in quotation marks plus square brackets, e.g. ["**Rutstroemia**" **juniperi** ], mean that the taxon has NOT been studied by us, but there are reasons to doubt the current generic placement of the taxon. Taxon names in *plain italics* are synonym names; names in bold refer to the accepted, correct name. The word "ined." added after the taxon name indicates that we are prepared to accept this new name, however the name is not yet validly published (according to ICBN, Greuter ([1994](#))).

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## KEY A

### Key to the genera based on the type of substrate (host) and (macro)morphology

1. Apothecia campanulate (verpoid, bell-shaped) . . . . . [Scleromitrla](#)  
(see also *Episclerotium* L. M. Kohn (Leotiaceae), Kohn & Nagasawa, [1984](#))
1. Apothecia cupulate to discoid (cup- or saucer-shaped) . . . . . [2.](#)
2. (1) Apothecia yellowish-green to greenish brown. . . . . [Lanzia](#)  
(see also *Piceomphale* Svrcek (Leotiaceae), Svrcek, [1957](#) )
2. Apothecia brownish . . . . . [3.](#)
3. (2) On woody substrate. . . . . [4.](#)
3. On other substrates. . . . . [5.](#)
4. (3) Apothecia short-stipitate, errumpent through outer bark, densely aggregated, margin at maturity often splitting, apothecia arising from a stroma embedded in the inner cortex of its hosts, ascospores unicellular. . . . . [Encoelia](#)
4. Apothecia long-stipitate, one to several arising from an indeterminate stroma, ascospores becoming septate and multicellular at maturity, often with secondary spores produced at the

poles. . . . [Rutstroemia](#)

5. (3) On cones of conifers. . . . [6.](#)

5. On other substrates. . . . [7.](#)

[6. (5) Apothecia dark olive-green, short-stipitate, cup discoid, many apothecia scattered on intact cones. . . . [Piceomphale](#) (excluded from the families)]

6. Apothecia brown, short-stipitate, cupulate to discoid, one to many from cone-scales of *Abies*. . . . "[Ciboria](#)" [rufofusca](#)

7. (5) On stromatized, decaying catkins. . . . [Ciboria](#)

7. On other substrates . . . . [8.](#)

8. (7) On stromatized seeds, fruits and berries . . . . [9.](#)

8. On other substrates . . . . [13.](#)

9. (8) On stromatized fruits of *Betula* or *Alnus* . . . . [Ciboria](#)

9. On other fruits . . . . [10.](#)

10. (9) Stroma formed superficially on a variety of fruits and berries, associated with a macroconidial anamorphic state of the *Botrytis* type. . . . [Botryotinia](#)

10. Stroma formed within fruits and berries. . . . [11.](#)

11. (10) Stroma formed within stone and pome-fruits of the family Rosaceae, associated with a macroconidial anamorphic state of the *Monilia* type. . . . [Monilinia](#)

11. Stroma formed within fruits of Ericaceae, Empetraceae and Pyrolaceae, *Monilia* anamorph with disjunctors, appearing on foliage 2-4 weeks after apothecial (teleomorphic) state . . . . [12.](#)

12. (11) Stroma formed within fruits of *Vaccinium* hosts, apothecia long stipitate, ascospores di- or trimorphic. . . . [Franquinia](#)

12. Stroma on other ericaceous hosts, ascospores usually monomorphic. . . . [Franquinia](#)

13. (8) On stromatized leaves. . . . [14.](#)

13. On other substrates. . . . [33.](#)

14. (13) On stromatized leaf-nerves. . . . [15.](#)

14. On stromatized leaf-plate. . . . [21.](#)

15. (14) On leaves of *Vaccinium* spp. . . . [16.](#)

15. On leaves of deciduous trees. . . . . [18.](#)
16. (15) Apothecial outer excipulum composed of globose cells (textura globulosa) . . . . . [Ciboria](#)
16. Apothecial outer excipulum composed of angular to prismatic cells (textura angularis-prismatica) . . . . . [17.](#)
17. (16) Stroma determinate, apothecial outer excipulum without a gelatinous layer . . . . . [Valdensinia](#)
17. Stroma indeterminate, apothecial outer excipulum with a gelatinous layer . . . . . [Poculum](#)
18. (15) Stroma up to 1mm thick, elongate, to 10 mm broad and 30 mm long, surrounding the midrib of overwintering leaves, ± detached from leaf-plate, well differentiated into a cortex and medulla. Apothecial stipe slender, up to 25 mm long. . . . . [Ciborinia](#)
18. Stroma not well differentiated. . . . . [19.](#)
19. (18) Apothecia yellowish-green, arising from blackish stromatized leaf-nerves and petioles of *Acer*, *Tilia*, *Fagus* and *Quercus*. . . . . [Lanzia](#)
19. Apothecia brownish. . . . . [20.](#)
20. (19) On leaves of *Quercus* and *Fagus* spp. . . . . [Poculum](#)
20. On leaves of other hosts. . . . . [Ciboria](#)
21. (14) On leaves of deciduous trees. . . . . [22.](#)
21. On leaves of other hosts . . . . . [24.](#)
22. (21) Apothecia short-stipitate, margin radially splitting in a stellate manner, hymenium pale yellowish-brown, outside brownish-black, associated with a macroconidial anamorphic state consisting of arthroconidia in chains (form genus *Acarosporium* ) borne in pycnidia. . . . . [Pycnopeziza](#)
22. Apothecia long-stipitate, brown, macroconidial anamorphic state wanting. . . . . [23.](#)
23. (22) Apothecia from stromata without an obvious stromatal rind . . . . . [Ciboria](#)
23. Apothecia from a discoid or crustlike stroma with a determinate stromatal rind. (see also [Scleromitruła candolleana](#) ) . . . . . [Ciborinia](#)
24. (21) On hosts of monocots . . . . . [25.](#)
24. On hosts of dicots. . . . . [28.](#)
25. (24) Stroma indeterminate, without a determinate stromatal rind, on poaceous, juncaceous and cyperaceous hosts . . . . . [Poculum](#)

25. Stroma a determinate sclerotium; pyramidal, globose or loaf-shaped. . . . . [26.](#)
26. (25) With a *Botrytis* macroconidial anamorphic state . . . . . [Botryotinia](#)
26. Macroconidial anamorphic state wanting. . . . . [27.](#)
27. (26) Stroma a sclerotium, medulla pinkish in immature sclerotia, on cyperaceous and juncaceous hosts . . . . . [Myriosclerotinia](#)
27. Stroma a sclerotium, medulla of immature sclerotia white . . . . . [Sclerotinia](#)
28. (24) Ascospores brown . . . . . [Lambertella](#)
28. Ascospores hyaline. . . . . [29.](#)
29. (28) Associated with a macroconidial anamorphic state . . . . . [30.](#)
29. Macroconidial anamorphic state wanting. . . . . [31.](#)
30. (29) Associated with a *Botrytis* macroconidial anamorphic state borne on free conidiophores. . . . . [Botryotinia](#)
30. Associated with a macroconidial state of arthroconidia in chains (form genus *Acarosporium*) borne in pycnidia . . . . . [Pycnopeziza](#)
31. (30) Stroma a determinate sclerotium; discoid, crustlike, pyramidal, globose or loaf-shaped with a well differentiated rind and medulla. . . . . [32.](#)
31. Stroma crustlike, without an obvious stromatal rind . . . . . [Ciboria](#)
32. (31) Stroma pyramidal, globose or loaf-shaped . . . . . [Sclerotinia](#)
32. Stroma discoid or crust-like . . . . . [Ciborinia](#)
33. (13) Stroma tuberoid, globose, loaf-shaped, pyramidal, cylindrical or discoid with a well differentiated rind and medulla . . . . . [34.](#)
33. Stroma indeterminate, with or without an obvious stromatal rind . . . . . [39.](#)
34. (33) Sclerotia cylindrical, loaf-shaped, tuberoid, pyramidal or discoid, on flowers, stems or roots of its host. . . . . [35.](#)
34. Sclerotia tuberoid to globose, borne in soils inbetween roots of its hosts; sclerotial medulla without obvious remnants of host tissues, or without gelatinous substance between sclerotial hyphae; macroconidial anamorphic state wanting . . . . . [38.](#)
35. (34) Sclerotia borne within stems of juncaceous and cyperaceous hosts, sclerotia cylindrical to tuberoid (see also [Sclerotinia tetraspora](#)) . . . . . [Myriosclerotinia](#)
35. Sclerotia formed on leaves, stems and roots of other plant families; sclerotia wholly or partially embedded in and digesting host tissues; sclerotial medulla with remnants of host tissues, or with

- a gelatinous substance inbetween sclerotial hypha . . . . . [36.](#)
36. (35) Macroconidial anamorphic state wanting . . . . . [Sclerotinia](#) (but see also [Botryotinia](#) and [Ovulinia](#) )
36. Macroconidial anamorphic state present . . . . . [36.](#)
37. (36) Sclerotia discoid; on wilting flowers (petals) of *Rhododendron*. Apothecia long-stipitate (up to 15 mm). Macroconidial anamorphic state (if present) of *Ovulitis* type; macroconidia borne on short conidiophores . . . . . [Ovulinia](#)
37. Sclerotia pyramidal, discoid or flat; on stems, leaves, corms or bulbs. Apothecia short-stipitate (usually less than 8 mm). Macroconidial anamorphic state and apothecial state often co-occurring; macroconidia borne on straight, branched conidiophores (form genus *Botrytis* ) . . . . . [Botryotinia](#)
38. (34) Apothecial outer excipulum with a layer of prismatic, elongate cells (textura prismatica) embedded in a gelatinous matrix. . . . . [Dumontinia](#)
38. Apothecial outer excipulum with a layer of angular to globose cells, no gelatinous matrix . . . . . [Sclerotinia](#).
39. (33) Ascospores brown . . . . . [Lambertella](#)
39. Ascospores hyaline . . . . . [40.](#)
40. (39) Stroma a blackened, mantling, crust-like indefinite stroma with a well differentiated rind, developed on rhizomes and bulbs of monocot plants . . . . . [Stromatinia](#)
40. Stroma lacking a well differentiated rind . . . . . [41.](#)
41. (40) Apothecial outer excipulum consisting of globose cells (textura globulosa) . . . . . [Ciboria](#)
41. Outer excipulum of apothecium consisting of angular to prismatic cells with a ± prominent layer of gelatinized, long celled hyphae . . . . . [Poculum](#)

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**KEY B**

**Key to the genera based on morphological criteria**

The key is currently unavailable.

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**KEY C**

**Key to the genera based on host association(s)**

The key is currently unavailable.

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[Botryotinia](#) (*Botrytis* anamorphs)

[Ciboria](#)

[Ciborinia](#)  
[Dumontinia](#)  
[Encoelia](#)  
[Franquinia](#) (*Monilia* anamorphs)  
[Lambertella](#)  
[Lanzia](#)  
[Monilinia](#) (*Monilia* anamorphs)  
[Myriosclerotinia](#)  
[Ovulinia](#) (*Ovulitis* anamorphs)  
[Poculum](#)  
[Pycnopeziza](#) (*Acarosporium* anamorphs)  
[Rutstroemia](#)  
[Scleromitrua](#)  
[Sclerotinia](#)  
[Stromatinia](#)  
[Valdensinia](#)

Synonyms and taxa excluded from the families: Gloeotinia , [Piceomphale](#) , [Scleroglossum](#) , [Verpatinia](#)

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#### [Botryotinia](#) Whetzel

Type species: *B. convoluta* (Drayton) Whetzel. Apothecia brownish, stipitate, cup-shaped to plane, on loaf-shaped to pyramidal to lenticular black sclerotia. Ascospores ellipsoid, hyaline, unicellular. Macroconidial anamorphic state of the [Botrytis](#) Micheli: L. form type, arising from the mycelium or sclerotial rind, embedded in host tissue in nature, conidiophores in bundles, straight, distally branched, macroconidia ellipsoid to ovoid to subglobose, produced from swollen ampullae of ultimate branchlets of the conidiophores. On herbaceous debris, withered leaves and decaying bulbs and corms. Apothecia in spring and early summer.

Literature: Drayton ([1937](#)), Jørstad ([1945](#)), Whetzel ([1945](#)), Røed ([1949](#), [1952](#)), Hennebert & Groves ([1963](#)), Hennebert ([1973](#)), Holst-Jensen & al. ([1997b](#)).

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#### [Ciboria](#) Fuckel.

Type species: *Ciboria caucus* (Reb.:Fr.) Fuckel. *Ciboria* is a heterogeneous assemblance of species characterized by  $\pm$  determinate stromata, an apothecial outer excipulum consisting of globose cells (textura globulosa) NOT embedded in a gelatinous matrix, and hyaline, unicellular ascospores. The genus is probably polyphyletic. The species on catkins of amentiferous trees constitute a monophyletic group. Based on scientific evidence and educated guess we distinguish **five groups** within the genus, the [true Ciboria](#) (on catkins), the [warted-spored Ciboria](#) , which are presumably obligate parasites and produce apothecia on fruits of amentiferous trees, the [deciduous leaf inhabitants](#), forming a  $\pm$  well differentiated stroma on leaves of deciduous trees, the herbaceous plant inhabitants, nutritioning on plant remnants of various kind (for groups three and four, see also [Rutstroemia](#) ), and a fifth [group of uncommon features](#), consisting of presumably unrelated taxa classified on the basis of stromatal type.

Literature: Whetzel ([1945](#)), Buchwald ([1947](#)), Schumacher ([1978](#)), Schumacher & al. ([1995](#)), Holst-Jensen & al. ([1997b](#)).



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**Ciborinia** Whetzel

Type species: *Ciborinia whetzellii* (Seaver) Seaver. The genus *Ciborinia* is a heterogeneous assemblance of species characterized by an apothecial outer excipulum consisting of globose cells (textura globulosa) NOT embedded in a gelatinous matrix, hyaline, unicellular ascospores, the production of  $\pm$  discoid sclerotia, and lacking a macroconidial anamorphic state. *Ciborinia* should probably be restricted to a group of leaf parasites on amentiferous trees, including the type species *C. whetzellii* on leaves of *Populus*. A number of taxa are keyed out here on the basis of the traditional generic character of a discoid, differentiated stroma. See also [Botryotinia](#), [Ciboria](#), [Myriosclerotinia](#), [Scleromitrla](#) (= *Verpatinia*) and [Valdensinia](#).

Literature: Whetzel ([1945](#)), Buchwald ([1947](#)), Batra & Korf ([1959](#)), Batra ([1960](#)), Holst-Jensen & al. ([1997a](#), [1997b](#)), Schumacher & Holst-Jensen ([1997](#)).

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**Dumontinia** L. M. Kohn

Type species: *Dumontinia tuberosa* (Hedw.:Fr.) L. M. Kohn. Apothecial outer excipulum composed of brick-shaped cells (textura prismatica) and an inner zone of loose hyphae embedded in a gelatinous matrix. Macroconidial anamorphic state wanting. The genus was segregated from [Sclerotinia](#) by Kohn ([1979](#)), and typified with *Dumontinia tuberosa* as the only species. One additional species (see below) has recently been referred to the genus.

Literature: Kohn ([1979](#)), Holst-Jensen & al. ([1997b](#)).

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**Encoelia** (Fr.) P. Karst.

Type species: *Encoelia furfuracea*. (Roth: Pers.) P. Karst. Apothecia short-stipitate (sessile), clustered or not, errumpent through the outer bark, arising from a delineate stroma inbetween inner bark cells of the host. Apothecial outer excipulum of small-sized, globose cells, outermost layer becoming loose with age, giving rise to a scurfy (granular) outer surface of the apothecium. Ascospores ellipsoid to fusiform, hyaline, unicellular.

Literature: Torkelsen & Eckblad ([1977](#)), Holst-Jensen & al. ([1997b](#)).

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**Franquinia** Holst-Jensen & T. Schumach. ined.

Type species: *Franquinia oxycocci*. (Woronin) Holst-Jensen & T. Schumach ined. The genus is segregated from [Monilinia](#) based on a combination of ecological (life history), morphological, and molecular, phylogenetic evidence. The members of *Franquinia* are characterized by the production of an apothecial state obligately alternating with a *Monilia* anamorphic state composed of ovoid cells in chains intercalated by disjunctors.

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**Lambertella** Höhnelt



Type species: *Lambertella corni-maris* Höhnelt. Apothecia arising from stromatized host tissues, stromata sometimes being delimited by blackened lines on the surface of the substrate. Outer excipulum composed of prismatic cells, more rarely by isodiametric, angular cells. Asci 8- or 4-spored. Ascospores (mostly) unicellular, spore walls becoming brown within ascus or soon after spore discharge. Macroconidial anamorphic state wanting.

The genus is heterogeneous, and some taxa currently classified as *Lambertella* should probably be referred to the Helotiaceae, e.g. "*Lambertella* *langei*", the presumably related "*Hymenoscyphus* *kermesinus* (Fr.) Arendholz, and yet another possibly unnamed taxon. We have not yet had the opportunity to examine the type species *Lambertella corni-maris* Höhnelt and to develop a sound concept of *Lambertella*. At this point, only a couple of brown-spored stromatic taxa with some affinity to a broad concept of *Lambertella* have been keyed out.

Literature: Whetzel (1943), Dumont (1971), Korf & Zhuang (1985), Schumacher & Holøs (1989), Holst-Jensen & al. (1997b).

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### **Lanzia** Sacc.

Type species: *Lanzia flavo-rufa* (Sacc.) Sacc. *Lanzia* is a segregate genus of *Rutstroemia*. Apothecia stipitate-cupulate, brown to greenish brown, arising from stromatized patches of host tissues, no obvious stromatal rind. Apothecial outer excipulum composed of thin-walled, prismatic cells (textura prismatica) NOT embedded in a gelatinous matrix. Ascospores hyaline, uni- to tricellular. Macroconidial anamorphic state wanting. On herbaceous debris or wood. Apothecia in early summer and autumn.

Literature: Dumont (1972), Korf (1973).

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### **Monilinia** Honey

Type species: *Monilinia fructicola*. (Winter) Honey. The genus *Monilinia* was segregated from *Sclerotinia* by Honey (1928), who further subdivided the genus into two (informal) sections, i.e. the Junctoriae (lacking intercalating disjunctors of the macroconidial chains) and the Disjunctoriae (having intercalating disjunctors of the macroconidial chains) (Honey, 1936). Batra (1991) included ca. 30 species in the genus (worldwide). In a molecular phylogenetic study including 18 species traditionally referred to *Monilinia*, Holst-Jensen et al. (1997a) demonstrated that the genus was polyphyletic, and that the Junctoriae constituted an evolutionary lineage distinct from the Disjunctoriae. Based on morphological and phylogenetic evidence the Disjunctoriae group of species are referred to the new genus *Franquinia*, retaining *Monilinia* for a restricted subset of species comprising the *Junctoriae* (*true Monilinia*) which infect fleshy fruits of the family Rosaceae and only rarely produce apothecia.

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### **Myriosclerotinia** N. F. Buchw.

Type species: *Myriosclerotinia scirpicola* (Rehm) N. F. Buchw. Apothecia cup-shaped to plane to funnel-shaped, brownish, stipitate, arising from a distinct sclerotium with a well-differentiated rind and medulla, medulla at first pinkish, becoming white when mature, developing within (or on) stems (culms) of cyperaceous and juncaceous hosts. Apothecial outer excipulum composed of

globose cells (textura globulosa). Ascospores hyaline, unicellular, ellipsoid to allantoid. Macroconidial anamorphic state wanting. Microconidial anamorphic state produced in sporodochia (form genus *Myrioconium* Sydow.) in locules within host tissues of the culms, or wanting. Apothecia produced in spring and early summer. Some authors treat the species as members of *Sclerotinia*.

Literature: Whetzel (1946), Buchwald (1947), Jørstad (1964), Schumacher & Kohn (1985), Vaage (1996), Holst-Jensen & al. (1997b).

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### **Ovulinia** Weiss

Monotypic genus.

Literature: Weiss (1940), Whetzel (1945), Dennis (1956), Gjørnum (1970b), Holst-Jensen & al. (1997b).

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### **Piceomphale** Svrcek

This monotypic genus has recently been excluded from the Sclerotiniaceae and Rutstroemiaceae by Holst-Jensen & al. (1997b). The genus is included in the key for convenience.

Literature: Svrcek (1957), Dixon (1974), Holst-Jensen & al. (1997b).

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### **Poculum** Velen.

Type species: *Poculum ruborum* Velen. The genus was adopted by Dumont (1972) to accommodate a group of species previously referred to *Rutstroemia* P. Karst. ss. White (1941), characterized by having a distinct layer of highly gelatinized, long-celled hyphae of the outer excipulum. As presently circumscribed, the genus is probably polyphyletic. We have not studied the generic type *Poculum ruborum*, growing on stems of *Rubus*. Two groups of species have been included here.

Literature: Velenovsky (1934), White (1941), Holst-Jensen & al. (1997b).

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### **Pycnopeziza** White & Whetzel

Type species: *Pycnopeziza sympodialis* (Bubak & Vleugel) White & Whetzel. Apothecia arising from a definite stroma with a differentiated rind and medulla, apothecia solitary or gregarious, short-stipitate to substipitate, brown to dark brownish black, cleistocarpous from beginning, then discoid to flat, finally margin rupturing irregularly, giving a stellate margin; or opening by a pore, becoming saucer-shaped with a circular, entire margin. Macroconidial anamorphic state (*Acarosporium* Bubak & Vleugel) produced in superficial, solitary, black pycnidia less than 1 mm diam., globose or flattened-globose, attached by a broad basal portion, opening by irregular splits from the apex toward the base, expanding widely to expose the conidial mass. Apothecia and pycnidial anamorph are frequently observed side by side on the substrate.

Literature: White & Whetzel (1938), Schumacher (1990), Holst-Jensen & al. (1997b).

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**Rutstroemia** P. Karst.

Type genus of the family Rutstroemiaceae. Type species: *Rutstroemia firma*. (Pers.: Fr.) P. Karst. Apothecia cup-shaped, brownish, stipitate, arising from stromatized patches of host tissues. Outer excipulum of angular to prismatic cells, with a  $\pm$  prominent layer of gelatinized, long-celled hyphae. Ascospores ellipsoid, hyaline, (uni-) bi- multi-cellular, frequently budding (producing microconidia) while still within ascus. Macroconidial anamorphic state wanting. On wood. Most species fruit in summer and autumn. (= *Kriegeria* Rabh.). See also [Ciboria](#), [Lanzia](#) and [Poculum](#). Literature: White ([1941](#)), Buchwald ([1947](#)), Dennis ([1956](#)), Holm & Holm ([1976](#), [1977](#)), Holst-Jensen & al. ([1997b](#)).

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**Scleromitrlula** S. Imai

Type species: *Scleromitrlula shiraiana* (Henn.) S. Imai. Apothecia stipitate-capitate, exceptionally stipitate-cupulate, the capitate forms with a pendent margin forming a collar around stipe apex interrupting the continuity between the hymenium and stipe. Outer excipulum of head (cup) of globose to angular to brick-shaped cells in chains perpendicular to stipe axis, medullary excipulum of textura intricata, subhymenium distinct, of densely packed hyphae. Stroma determinate, of the lenticular to pyramidal type, developing on surface of infected host fruits, leaves or stems; stroma black outside, white to greyish inside, with a well-developed dorsi-ventral rind composed of thick-walled, melanized, globose to prismatic cells, stromatal cortex and medulla not much differentiated, of compact textura oblita with heavily gelatinized walls enveloping partly digested and undigested host tissues. Ascus inoperculate, with a thickened apex, pore channel wall J+ or J- after pretreatment in 2% KOH. Ascospores hyaline, ellipsoidal to allantoid, unicellular, eguttulate or with one or two minute polar guttules. Macroconidial anamorphic state wanting. The genera *Scleroglossum* Hara and *Verpatinia* Whetzel & Drayton are recent synonyms.

Literature: Imai ([1941](#)), Whetzel ([1945](#)), Groves & Elliott ([1961](#)), Kohn & Nagasawa ([1984](#)), Holst-Jensen & al. ([1997b](#)), Schumacher & Holst-Jensen ([1997](#)).

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**Sclerotinia** Fuckel

Type genus of the family Sclerotiniaceae. Type species: *Sclerotinia sclerotiorum* (Lib.) de Bary. Apothecia cup-shaped to funnel-shaped to plane, brownish, stipitate, arising from distinct, free, tuberoid sclerotia with a carbonaceous rind (black) and medulla (white) without remnants of host tissue. Apothecial outer excipulum of globose to hexagonal cells. Ascospores hyaline, ellipsoid, unicellular, multiguttulate. Macroconidial anamorphic state wanting. Terricolous or among herb debris of a number of vascular plants; apothecia in spring, summer or autumn.

Literature: Whetzel ([1945](#)), Kohn ([1979](#)), Holst-Jensen & Schumacher ([1994](#)), Graf & Schumacher ([1995](#)), Vaage ([1996](#)), Holst-Jensen & al. ([1997b](#)).

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### **Stromatinia** Boud.

Type species: *Stromatinia rapulum* (Bull.) Boud. Apothecia stipitate-cupulate, brownish, arising from a mantling stroma covering the affected "root" organs of the host. Ascospores hyaline, ellipsoid, unicellular. Macroconidial anamorphic state wanting. On rhizomes, corms and bulbs of its monocot hosts. Apothecia in spring or early summer.

Literature: Whetzel ([1945](#)), Jørstad ([1945](#)), Drayton & Groves ([1952](#)), Schumacher ([1984](#)), Holst-Jensen & al. ([1997b](#)).

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### **Valdensinia** Peyronel

Monotypic genus. Indeterminate crust-like stromata on leaf nerves and petioles. Macroconidial anamorphic state = form genus *Valdensia* Peyronel (syn. *Saliastrum* Kujala).

Literature: Peyronel ([1923](#), [1953](#)), Kujala ([1946](#)), Gjærum ([1970a](#), [1993](#)), Holst-Jensen & al. ([1997b](#)).

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### **List of species:**

The list is currently being compiled. It will soon be available.

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